~~DOES NOT CIRCULATE~~

UNIVERSITY OF MICHIGAN
APR 28 1953
MEDICAL LIBRARY

100th Anniversary Number

Minnesota State Medical Association

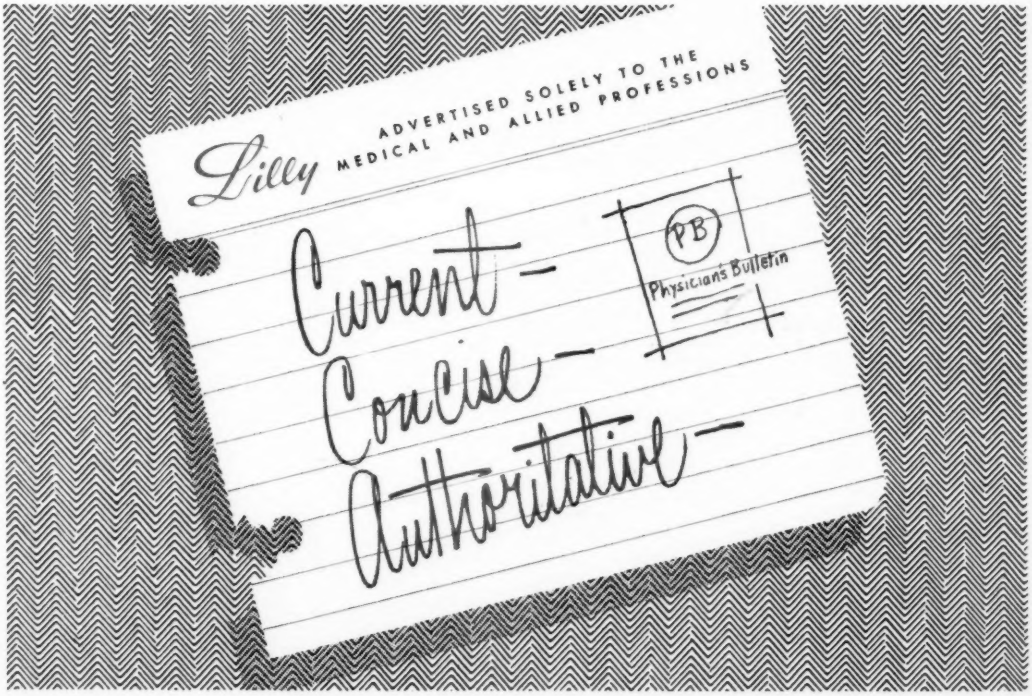
1853-1953

Minnesota MEDICINE

PUBLISHED MONTHLY BY THE MINNESOTA STATE MEDICAL ASSOCIATION

Volume 36 APRIL, 1953 Number 4

Printed in U.S.A. 40c a copy—$3.00 a year



nusually effective in infections of the gastrointestinal tract..

Chloromycetin is a notably effective, we

Minnesota Medicine

Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

Volume 36 **April, 1953** **Number 4**

Contents

ONE HUNDRED YEARS OF ORGANIZED MEDICINE IN MINNESOTA.
Robert Rosenthal, M.D., Saint Paul, Minnesota... 323

MEDICAL SCHOOLS AND MEDICAL EDUCATION OVER THE PAST CENTURY.
Harold S. Diehl, M.D., Minneapolis, Minnesota.. 332

EIGHTY YEARS OF PUBLIC HEALTH.
Netta Wilson, M.A., M.S., and *Albert J. Chesley, M.D.*, Saint Paul, Minnesota..... 337

HISTORY OF THE MINNESOTA STATE BOARD OF MEDICAL EXAMINERS.
F. H. Magney, M.D., Duluth, Minnesota..... 341

MEDICAL JOURNALISM IN MINNESOTA.
Carl B. Drake, M.D., Saint Paul, Minnesota..... 344

A CENTURY OF MEDICINE.
S. Marx White, M.D., Minneapolis, Minnesota.... 349

ONE HUNDRED YEARS OF SURGICAL PROGRESS.
Donald C. Balfour, M.D., Rochester, Minnesota.. 356

EARLY ORTHOPEDIC SURGERY IN MINNESOTA
Carl C. Chatterton, M.D., F.A.C.S., Saint Paul, Minnesota 360

PROGRESS IN PEDIATRICS IN MINNESOTA.
O. W. Rowe, M.D., Duluth, Minnesota..... 364

MODERN OTOLARYNGOLOGY AS A SPECIALTY.
Lawrence R. Boies, M.D., Minneapolis, Minnesota 368

OPHTHALMOLOGY IN THE PAST CENTURY.
Erling W. Hansen, M.D., Minneapolis, Minnesota 371

DERMATOLOGY IN THE FIRST CENTURY OF MEDICINE IN MINNESOTA.
Henry E. Michelson, M.D., Minneapolis, Minnesota, and *Francis W. Lynch, M.D.*, Saint Paul, Minnesota 375

A HUNDRED YEARS OF PROGRESS IN THE THERAPY OF URINARY INFECTION.
William F. Braasch, M.D., Rochester, Minnesota.. 378

MINNESOTA OBSTETRICS.
William P. Sadler, M.D., Minneapolis, Minnesota 381

NEUROLOGIC AND PSYCHIATRIC TRENDS IN MINNESOTA.
A. B. Baker, M.D., B. C. Schiele, M.D., D. W. Hastings, M.D., and *R. A. Jensen, M.D.*, Minneapolis, Minnesota..... 384

LABORATORY AIDS TO MEDICAL PRACTICE:
Rapid Frozen Sections—Their Value in Diagnosis.
Malcolm B. Dockerty, M.D., Rochester, Minnesota 387

PRESIDENT'S LETTER:
For the Benefit of the Sick..... 389

EDITORIAL:
State Medical Association Centenary..... 390
Reorganization, with Reservations..... 390
American Medical Educational Fund Drive..... 391
False Propaganda 392

MEDICAL ECONOMICS:
Facilities Increase for Rural Medical Care..... 395
Commission Formed to Study Taxes, Social Security 396
Survey Shows GP Fares Well..... 396

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS.. 397

MINNESOTA STATE MEDICAL ASSOCIATION—One Hundredth Anniversary Meeting 398

REPORTS AND ANNOUNCEMENTS..... 402

WOMAN'S AUXILIARY 410

IN MEMORIAM..... 412

OF GENERAL INTEREST..... 416

BOOK REVIEWS 426

Contents of MINNESOTA MEDICINE copyrighted by Minnesota State Medical Association, 1953

Entered at the Post Office in Saint Paul as second class mail matter. Accepted for mailing at the special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 13, 1918.

MINNESOTA MEDICINE

OFFICIAL JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION

Published by the Association under the direction of its Editing and Publishing Committee

Office of Minnesota State Medical Association,
496 Lowry Medical Arts Bldg., Saint Paul 2, Minnesota.

EDITING AND PUBLISHING COMMITTEE

E. M. HAMMES, Saint Paul
PHILIP F. DONOHUE, Saint Paul
L. M. EATON, Rochester
J. J. HEIMARK, Fairmont
C. L. OPPEGAARD, Crookston
T. A. PEPPARD, Minneapolis
H. A. ROUST, Montevideo
O. W. ROWE, Duluth
HENRY L. ULRICH, Minneapolis
A. H. WELLS, Duluth

EDITORIAL STAFF

CARL B. DRAKE, Saint Paul, Editor
GEORGE EARL, Saint Paul, Associate Editor
HENRY L. ULRICH, Minneapolis, Associate Editor

BUSINESS MANAGER
J. R. BRUCE

Annual Subscription—$3.00. Single Copies—$0.40. Foreign and Canadian Subscriptions—$3.50

The right is reserved to reject material submitted for editorial or advertising columns. The Editing and Publishing Committee does not hold itself responsible for views expressed either in editorials or other articles when signed by the author.

Classified advertising—ten cents a word; minimum charge, $2.00; key number, 25c additional. Remittance should accompany order.

Display advertising rates on request.

Address all communications concerning the journal to Minnesota Medicine, 2642 University Avenue, Saint Paul 14, Minnesota. Telephone Nestor 2641.

A MODERN PRIVATE SANITARIUM

for the Diagnosis, Care and Treatment of Nervous and Mental Disorders

MAIN BUILDING—One of 10 Units in "Cottage Plan"

ST. CROIXDALE ON LAKE ST. CROIX

PRESCOTT, WISCONSIN

Located on beautiful Lake St. Croix, 18 miles from the Twin Cities, it has the advantages of both City and Country. Every facility for treatment provided, including recreational activities and occupational-therapy under trained personnel. Close personal supervision given patients, and modern methods of therapy employed. Inspection and cooperation by reputable physicians invited. Rates very reasonable. Illustrated folder on request.

Prescott Office
Prescott, Wisconsin
Howard J. Laney, M.D.
Tel. 39 and Res., 76

Consulting Neuro-Psychiatrists
Hewitt B. Hannah, M.D., Andrew J. Leemhuis, M.D.
527 Medical Arts Bldg., Tel. MAin 1357, Minneapolis, Minn.

Superintendent
Ella M. Leseman
Prescott, Wisconsin
Tel. 69

Minnesota Medicine

Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

Volume 36 **April, 1953** **Number 4**

ONE HUNDRED YEARS OF ORGANIZED MEDICINE IN MINNESOTA

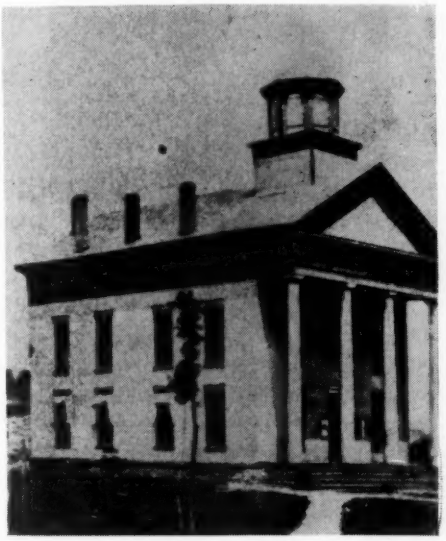
History of the Minnesota State Medical Association, 1853-1953

ROBERT ROSENTHAL, M.D.
Saint Paul, Minnesota

ONE DAY in July, 1853, eleven enterprising young doctors gathered in the fine new Court House of Saint Paul in the Minnesota Territory for the purpose of organizing a medical society. They were men of considerable education, these doctors. Many of them had studied for as much as two years in the university medical schools of Massachusetts, Pennsylvania, New York, Ohio, and at Rush Medical school in Chicago. Quite a few of them had come to the Northwest country for their health.

Ten years before, there had been just one civilian doctor west of Prairie du Chien. His name was Christopher Carli. He had started his long travels into the new world from Heidelberg and finally settled in Stillwater. Now there were fifteen or sixteen, most of them newly arrived from the East. In fact, nothing in previous history matched the speed with which easterners were now pouring into the territory and building up the new town of Saint Paul. Churches and schools appeared like magic; also a bank, a hotel, newspapers and even an insurance company. With equal speed, the doctors, some of whom had hardly had time to hang out their shingles, now set about organizing a medical society.

The political climate was favorable but turbulent times were just ahead. Alexander Ramsey was the territorial governor and Henry Sibley of the American Fur Company represented the territory in Congress. The settlers were mainly traders, lumber men and real estate speculators. All of them were clamoring for an end to the negotiations with the Indians, and the opening of the rich lands in the river valleys to the West and South. The Civil War was less than ten years away and the great land boom which was to collapse in 1857 was in the making.



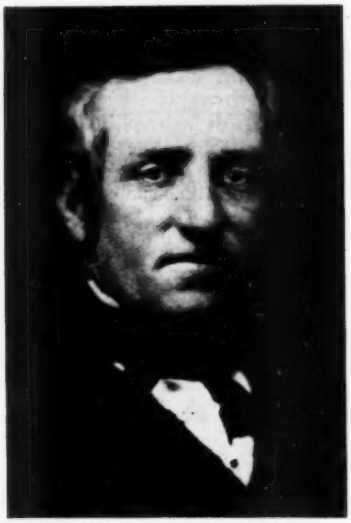
THE COURT HOUSE IN SAINT PAUL
MINNESOTA TERRITORY

Building in which the Minnesota State Medical Association was organized in July, 1853.

The shrill creaking of ox carts still sounded twice a year as the traders journeyed down to the river from the Red River trail of the North. But the doctors who rode to the Court House on that July day were neither traders nor frontiersmen. They were physicians when they arrived at this upper Mississippi outpost and they were destined to play a considerable role as citizens, as well as doctors, in the development of Minnesota.

Dr. Rosenthal is chairman of the Historical Committee of the Minnesota State Medical Association.

A few medical societies in the United States date back to Revolutionary times. The Medical Society of New Jersey was organized in 1766, the Massachusetts society in 1781 and the Medical Society of Delaware in 1789. Perhaps a dozen more societies came into existence in the first half of the nineteenth century including the State Medical Society of Wisconsin in 1841 and the Iowa State Medical Society in 1847.



DR. THOMAS REID POTTS

First President of the Minnesota State Medical Association (then known as the Minnesota State Medical Society).

The settlements and the trails, the river fronts and the trading posts of the new Minnesota territory already abounded in quacks and Indian healers of all descriptions when the call for the first meeting of regular practitioners in Minnesota was published in *The Minnesotian* of July 16, 1853.

"We are requested to state" said this announcement, "that the medical profession of the territory will hold a convention at St. Paul on the 23rd instant."

The meeting was held as announced and the proceedings were published in the *St. Anthony Falls Express* of July 30, in *The Minnesotian* and *The Democrat* of that month, and in the *Northwestern Medical and Surgical Journal* of Chicago in the August issue of that year. A constitution and by-laws, modelled on those of the Pennsylvania and Illinois societies, were adopted. Committees on Arrangements, on the Practice of Medicine, on Surgery, Obstetrics, Drugs and Medicines and on Publication were appointed. Resolutions were passed applauding the stand taken by the National Medical Association on intoxicating drugs and medicines and pledging the new society to cooperate with the national body. Officers were elected and a meeting place selected for the 1854 meeting. All of these will certainly strike the medical ear of one hundred years later as standard procedure for the conduct of medical meetings.

The men who were elected to office that day were already important men in the community. They were headed by Dr. Thomas Reid Potts as president. Dr. Potts was elected President of the Board of Trustees of the town and may well be called the first mayor of Saint Paul. He had been educated at the University of Pennsylvania Medical school. He was a relative of Henry Sibley and a leader in the territory. He came to Saint Paul in 1849 and was perhaps elected because he was much the oldest man present. He was forty-four years old at the time.

The vice presidents were Dr. John H. Murphy of St. Anthony Falls and Dr. A. E. Ames who had established himself across the river from St. Anthony in the settlement which later became Minneapolis. Both were from Rush Medical College in Chicago, but Dr. Murphy had arrived in 1849 and Dr. Ames had been in the territory since 1851. The names of both were to loom large in subsequent history of the society and of Saint Paul and Minneapolis. The corresponding secretary was Dr. T. T. Mann who had come west for his health in 1852 after graduation from the University of Pennsylvania and an extended tour of Europe. Dr. Charles L. Anderson of St. Anthony Falls was recording secretary. Dr. Anderson had come to the territory the year before and was a distinguished naturalist as well as physician. Henry Thoreau was to visit him later in St. Anthony Falls and Minneapolis. The treasurer was Dr. James D. Goodrich of Saint Paul who, like so many others, had come to Saint Paul for his health the year before. He had practiced for several years in Cleveland and was to become Saint Paul's first health officer later on.

The censors were Drs. J. H. Day, W. W. Finch and John J. Dewey. One of these three, Dr. Finch, had come to Saint Paul from Vermont that very year but moved later to Steele County. The

other two, Dr. Day and Dr. Dewey, were leading figures in the early history of the territory. Dr. Day was practicing with Dr. Carli in Stillwater at the time. He had arrived in 1847 and had served as the first Register of Deeds and recorded the first deed in Ramsey county. He was also an architect, apparently, since he is said to have drawn the plans for the new court house, built just the year before the meeting. It was an imposing square frame building with a colonaded entrance, and his fee for the plans was reported to be $10. Dr. Dewey, the other censor, came to Saint Paul in 1847. He was educated at the Albany Medical College and he established the first drug store in Saint Paul in 1848. He also had the distinction of being the first physician to settle permanently in Saint Paul.

Members of the Committee on Arrangements were Drs. Murphy and Anderson and Dr. A. E. Johnson who had just arrived in 1853 and had settled in Hennepin with Dr. Anderson. Dr. Johnson came from New York. He was graduated from the Columbia Medical school and he was also a naturalist and ethnologist of note. Later he founded the Minneapolis Academy of Natural Sciences.

The Committee on the Practice of Medicine was composed of Drs. Carli and Anderson and Dr. A. G. Brisbine who had come to Saint Paul from Ohio in 1851, a graduate of Jefferson Medical College.

Dr. Charles McDougall was the military surgeon from Fort Snelling. He had arrived very recently to take the place of Dr. Ames who had served briefly there as contract surgeon, and he was appointed to the Committee on Surgery, together with Drs. Ames and Day. Drs. Potts, Murphy and Mann were named to the Committee on Obstetrics. The Committee on Drugs and Medicines was made up of Drs. Goodrich and Mann and Dr. Samuel Willey, all of Saint Paul. Dr. Willey had come to Saint Paul because of tuberculosis in 1852. He had graduated from Yale and from the Cleveland Medical College and, although he was reported to have arrived with exactly fifty cents in his pocket, he was soon well established in practice with Dr. Brisbine. Promptly he became a dashing figure in Saint Paul society. He was president of the association at the re-organization in 1869, and in 1870 he served as vice president of the American Medical Association.

All of these men were present in person at the meeting except Drs. Carli, Day, Willey, Brisbine and McDougall who were accepted as founding members at their own request.

Dr. A. W. Daniels was there that day, too, by special summons. So was Dr. O. P. Marsh of Saint Paul, according to the account in the *St. Anthony Falls Express*. Dr. Marsh apparently had arrived in Saint Paul only a very short time before, but Dr. Daniels was the only man present from outside Saint Paul, St. Anthony Falls, Hennepin and Stillwater. Dr. Daniels had come from New Hampshire but had graduated from the Medical College of Ohio at Cincinnati in 1853 and had been appointed, at about the same time, assistant surgeon at Fort Ridgley in the western part of Nicollet County. Later he became resident physician to the Lower Sioux in Redwood County. Later still, he moved to St. Peter where he practiced for many years.

The new society chose Dr. Murphy as its delegate to the so-called National Medical Association, and the transactions of the American Medical Association at St. Louis in 1854 duly recorded his presence as delegate from Minnesota. Actually, he was not the first doctor from the upper Mississippi to attend a national medical meeting. Dr. Ames had been at the meeting of 1848; and so had Dr. Daniels, Dr. Marsh and Dr. Johnson. The habit of attending meetings was obviously well established among medical men before the organization of the Minnesota medical society.

It was agreed at that first meeting that the society would meet again in June, 1854; but if the 1854 meeting was held, no record of it remains. The society was evidently regarded as a going concern in 1856, however, because the *Minnesota Republican* of January 17 recorded an election of officers under the caption, "Minnesota Medical Society." Dr. Potts of Saint Paul was still the president; Dr. Murphy of St. Anthony Falls was the vice president. The corresponding secretary was Dr. Goodrich of Saint Paul and the recording secretary was Dr. J. V. Wren of Saint Paul, who had apparently been in the territory for a few years but was more preacher than doctor; he was also said to be more interested in politics than medicine. The treasurer was listed as Dr. Day who had now moved to Saint Paul, and the censors were Dr. Ames of Minneapolis, Dr. Johnson of St. Anthony Falls and Dr. Franklin R. Smith of Saint Paul. Dr. Smith had practiced for

a number of years in Pennsylvania before he settled in Saint Paul in 1855. He was a Quaker and greatly respected by fellow practitioners, particularly as an obstetrician. The Committee on Publication was composed of Drs. Ewing (also called R. W. Wing in the Saint Paul City Directory of 1856-57), Marsh of Saint Paul and C. L. Anderson of Minneapolis. The meeting at which these officers were elected was held, according to another account, on January 3, 1856, in Dr. Wren's office.

In the Saint Paul City Directory of 1856-57 virtually the same names appear as officers of the Minnesota Medical Society, though the names of two newcomers, Drs. W. H. Morton and J. H. Stewart, of Saint Paul, are added to the censors and the names of Drs. R. W. Wing and O. P. Marsh of Saint Paul, and Charles L. Anderson of Minneapolis appear as members of a standing committee.

This is the last mention of the society in print at the time, though in the proceedings of the meeting of 1869, at which the society was reorganized, there is the following statement:

> "Two subsequent meetings were held, (after 1855) the last being at St. Anthony in 1857. After that period the society was allowed to languish. The Rebellion broke out and a large number of members entered the service and no meetings have been held, until the call appeared under which the society assembled today at 11:00 a.m. at the International Hotel."

The outbreak of war undoubtedly delayed the re-organization of the society. Most authorities believe it was the panic of 1857 which killed off society activities after that year, however, just as it killed so many business activities of the time. All of the doctors who did not go elsewhere were too busy, for a while, trying to survive the hard times to have any attention left over for medical organization.

When they did meet again it was with Dr. Potts and the officers of the old society in charge. But the picture in medicine, as in the state and the country, had changed almost past recognition. It was 1869 and the Civil War was over. The frontiers had been pushed back far beyond the Mississippi. Minnesota was a state, now, and there were doctors represented, even at this initial meeting, from Red Wing, Rochester, St. Peter, Austin, Albert Lea, Owatonna, Carver, Luverne and Mankato as well as Minneapolis, Saint Paul and Stillwater. Among these new, outstate representatives was Dr. W. W. Mayo who had paused briefly in Saint Paul in 1854, but had pushed on to Le Sueur and then to Rochester.

The notice of the meeting which was printed in Saint Paul papers of January 20 and 21 announced that "business of importance" would be presented. This business of importance was undoubtedly the presentation of a possible medical practice act to be passed by the Legislature, then in session. In due course, a resolution was passed at the meeting to the effect that, "in case the Legislature now assembled desire to protect the citizens of this state against quackery, it is the duty of this society to cooperate with the Legislature and lend its assistance in framing all needful laws upon the subject; and that Drs. Willey, Sheardown, and Stewart be appointed a committee as the organ of the Society for this purpose." But this was not the only business of the 1869 meeting.

The meeting convened with Dr. Potts shortly assuming the chair and Dr. D. W. Hand acting as secretary. Dr. Ames was there representing the 1857 committee of censors and he proposed a list of thirty-nine names for acceptance by the credentials committee made up of Drs. J. H. Stewart of Saint Paul, N. B. Hill of Minneapolis and Dr. Mayo. These thirty-nine men, together with the officers, were seated in the convention. They included Drs. E. J. Davis and J. C. Jones of Mankato; W. W. Mayo and E. W. Cross of Rochester; S. B. Sheardown of Winona; J. A. Allen of Austin; A. W. Daniels of St. Peter; O. Ayer of Le Sueur; N. B. Hill, C. G. Goodrich, Charles A. McCollum, W. F. Hutchinson, J. J. (H. H.?) Kimball, J. H. Churchill, C. J. Dubois, H. A. Dubois, O. J Evans and A. H. Lindley, all of Minneapolis; Samuel Willey, J. H. Stewart, Alfred Wharton, D. W. Hand, S. D. Flagg, Brewer Mattocks, Charles E. Smith, E. H. Smith, A. G. Brisbine, John Steele, M. Hagen, J. B. Phillips, Adelard Guernon, all of Saint Paul; W. A. Griffin and C. E. Rogers of Carver; W. W. Sweney and Charles Hewitt of Red Wing; A. C. Wedge, Albert Lea; J. C. Rhodes and H. F. Noyes of Stillwater and Solomon Blood of Owatonna.

There were differences of opinion as to the procedure to be followed but eventually the convention decided to adopt the old constitution and by-laws and a new set of officers was elected

forthwith. They were Drs. Samuel Willey, Saint Paul, president; A. E. Ames of Minneapolis, vice president; Alfred Wharton of Saint Paul and E. J. Davis of Mankato as corresponding and recording secretaries, respectively. The treasurer was Dr. S. B. Sheardown of Winona and the censors were J. H. Murphy who had moved from St. Anthony Falls to Saint Paul, N. B. Hill of Minneapolis, W. W. Mayo of Rochester, A. C. Wedge of Albert Lea, and J. C. Rhodes of Stillwater. There was also a Standing Committee made up of Drs. A. G. Brisbine of Saint Paul, E. C. (or C. E.) Rogers of Carver and J. E. Finch of Hastings. All this was accomplished at the morning session.

In the afternoon, they decided to revise the constitution and by-laws and appointed a committee to do it. They appointed a committee on finances, too, and decided on an assessment of $2.00 a year per member which would certainly be ample to meet current expenses. They decided to have two meetings a year in different localities of the state, a practice which continued for a number of years, and chose Owatonna for the June meeting that year. Three men were selected on the spot to deliver addresses at the meeting. They were Drs. Ames, Hewitt and Kimball and the program, selected by a committee composed of Drs. Hewitt, Noyes and Sheardown, was to be as follows:

"1. Essay on Rheumatism—Dr. Kimball
2. Discussion of Dr. Kimball's essay. Led by Dr. Wharton of Saint Paul and A. B. Stuart of Winona.
3. Discussion of Quackery, Its Diagnosis and Treatment. Drs. Brewer Mattocks and Hewitt of Red Wing were to lead the discussion.
4. Adjournment to 7 p.m. to hear the address by Vice President Ames of Minneapolis.
5. Reports of Committees and Adjournment."

The members also accepted the suggestion of Dr. Blood of Owatonna that every member be requested to report a case from his own practice at each meeting. At his suggestion, also, a committee was appointed, composed of one member from each county, to report on the number of physicians practicing in their respective counties including both regulars and irregulars.

This last committee reported at the Owatonna meeting which convened as planned on June 16, 1869, at Dresser's Hall. The committee had found physicians in practice in Ramsey, Hennepin, Washington, Dakota, Fillmore, Houston, Wabasha, Steele, Olmsted, Goodhue, Winona and Dodge counties. The largest number were in Ramsey and Hennepin counties, though Fillmore and Winona counties were close seconds. The total number of regular practitioners was 119 and the total number of irregulars not recognized by the societies was ninety-three.

The concern of the society of 1869 about irregulars and quacks was therefore not to be wondered at. The legislation developed from the action taken at the re-organization meeting had actually passed the Legislature on March 4, 1869, and high hopes were no doubt entertained for it. The truth is, however, that results were disappointing. In the first place, there was no adequate means of determining whether or not a diploma had been forged or stolen. Furthermore, the country was overrun with obscure, inadequate diploma mills. Also, there was the State Homeopathic Institute, founded in 1867, which was given the same right of conferring degrees as any medical school. But the homeopaths, instead of restricting their diplomas, bestowed them upon any passing quack who expressed a belief in homeopathy. The result was that the doctors who had worked to secure passage of the act of 1869 now worked just as hard to secure its repeal; and Minnesota had no further medical practice act on its books until 1883.

At the Owatonna meeting, Dr. J. C. Rhodes of Stillwater introduced a motion prohibiting admission of any person to membership in the society who could not produce satisfactory evidence of being a legal practitioner of medicine. The resolution was adopted, but the amount of discussion showed how difficult the whole matter of applying standards was, even among so-called legal practitioners. In fact, Dr. Mattocks' scheduled discussion of "Quackery" precipitated such a lively debate on what was and what was not quackery that the whole matter appears to have been dropped in favor of less controversial subjects such as typhoid fever.

It is interesting to note that the president, Dr. Willey, offered two prizes out of his own pocket for competition among the members. One, for $50, was for the best essay on "Epidemic and Endemic Diseases of Minnesota." The other, also for $50, was for the best essay on "Cerebro-spinal Meningitis." These prizes figured thereafter for

some years in the proceedings of the society. There was seldom any competition for them and only one essay was submitted, usually, for each prize. The first winner, Dr. W. W. Sweney of Red Wing, won both prizes and endorsed his winnings over to the society to establish a "prize fund."

The February meeting of 1870 was notable for the adoption of an amended constitution and by-laws which set up an elaborate mechanism for examining prospective members for the diploma of membership in the Society. Thirty new members from many parts of the state were accepted for membership and the first presidential address, provided for in the amended constitution, was given by Dr. Willey. It was a genuinely distinguished address with overtones that were to be heard, year by year, to this day in the addresses of his successors.

Dr. Willey called for the keeping of vital statistics by the members themselves, since there was no other agency to do it. He called for specialism, but with a sound basis of experience in all fields of practice. Also, he called for laws to curb quackery and for strict adherence to the code of ethics of the American Medical Association in the relationships of members to each other and, especially, to younger men just entering practice. It is worth noting that the special committee appointed to report on the president's address, while heartily approving most of his suggestions, sadly remarked that laws regulating the practice of medicine "do not and cannot reach the cause of the success of quackery among the people, but that the cause is to be found in the deficient knowledge on the part of the people in regard to the real ground upon which the practice of medicine rests, and that, so long as that deficiency exists, quackery will flourish. If legislative action is to be had, it should be directed to the removal of that cause." Dr. Charles N. Hewitt of Red Wing who was soon to become the head of the first state health department, signed the report as chairman. Both Dr. Willey and Dr. Hewitt were paving the way, however, for establishment of two fundamental functions of their association in the next half century, to foster protective legislation and also to foster public education as a means of destroying quackery.

To follow the year-by-year history of the Association from 1870 is obviously impossible in a brief review. The extended history of the Association by Dr. Arthur S. Hamilton was published serially in MINNESOTA MEDICINE beginning in January, 1942. That account and Dr. Hamilton's History of the Hennepin County Medical Society and the History of the Ramsey County Medical Society by Dr. J. M. Armstrong, as well as histories of other county societies of the state, published from time to time over a period of several years in the same journal, should be read for their delightful detail about the life and times of the men who founded and carried on the Association, as well as for the continued story of its development.

From the year 1870, meetings were held regularly at the scheduled times, with more and more men from all over the state participating in the program. Scientific papers began to take on a far more varied and extensive character each year. Their subject matter accurately reflected the tremendous development of scientific medicine in Minnesota and the world outside.

In the early years, Minnesota doctors were greatly preoccupied with consumption and the effect upon it of Minnesota's climate. Many of the early physicians suffered from tuberculosis and came to Minnesota in the hope of being cured. Newspapers refused to admit that lung disease could exist in the territory and some of them, like the *St. Anthony Falls Express*, exhibited actual hostility to the coming of doctors to the territory. They were regarded as useless except, perhaps, to aid the midwives and to bandage the wounds of Indians. The doctors, themselves, soon recognized the fact that Minnesota air, alone, was not accomplishing the expected miracles. For a while they temporized with the assumption that the scent of pines had a therapeutic effect and that, when the pines were cut down, the effect was dissipated. In 1872, however, Dr. Hewitt reported to the American Medical Association meeting of that year that persons with developed phthisis could not expect relief from Minnesota's climate.

Cholera appeared in the territory in 1849 and became epidemic in 1854. Typhoid fever was a constant problem. So were smallpox, diphtheria and rheumatism. Surgeons practiced without the aid of anesthetics, though many of them were undoubtedly aware of the properties of ether, since Long's first use of it in a surgical operation had taken place in 1842 and Morton's famous operation had occurred in 1846. In 1854 Dr. W. W.

Finch of Saint Paul made this announcement in the newspaper: "Being familiar with the Use of Ether, operations in surgery will be performed under its influence without pain, if desired."

Many other great milestones of medicine were established in the years between 1853 and the turn of the century and news of them reached the frontiers of America with remarkable speed, considering the difficulties of communication. Preventive medicine received a great boost with the establishment, through the efforts of the Minnesota State Medical Society, of a state board of health, the third such board in the entire country. Only Massachusetts in 1867 and California in 1870 had preceded it. The act was drawn up at the society's meeting of 1872 in Saint Paul. The society also proposed a bill legalizing dissection at that meeting. Both were passed by the Legislature, though not without a fight. Dr. Hewitt was made secretary and continued in the post until 1897 with a salary, the first year, of $200, a figure which was no measure of the energy, devotion and progressiveness which he brought to the office. Largely due to his pioneering efforts, and the efforts of the individual members, vaccination got an early start in Minnesota. Within a relatively few years, smallpox ceased to be a major preoccupation of the members at their meetings. Diphtheria continued to be a source of worry. At the seventeenth meeting in 1885, Dr. A. E. Spalding of Luverne reported on the use of antitoxin in seven cases, "too few for sufficient proof," he said, "but . . . I cannot help but feel that we have reason to take courage." A committee reported on the use of it in 643 cases the next year, with a drop from a 16.17 death rate to 12.09; but acknowledged that many of the patients were treated too late and with too small a dosage. Few who were present that year had had any clinical experience with the marvelous new treatment, but by 1898, the same committee was able to report "that no remedy ever came to trial that stood the test and became standard so soon."

Antiseptic surgery or "Listerism," as it was called, had considerable prejudice and opposition to overcome in Minnesota, as elsewhere. Lister had begun his great work in antiseptic surgery about 1870; but at the twelfth annual meeting of the Minnesota State Medical Society in 1880, Dr. A. C. Wedge of Albert Lea devoted his entire presidential address to Listerism and regretted that he had been "unable to learn of a single case in which the Lister method had been followed in Minnesota." At the same time, he did think that a large number of men were using disinfectants to some extent.

Dr. Perry H. Millard of Stillwater was president at the fifteenth annual meeting of the Association in 1883 and he devoted his entire presidential address to the work of Pasteur and Lister and the new bacteriological science. "We hope denunciations of Lister have now reached their height," said Dr. Millard, "and we prophesy fame next to none for Dr. Lister."

The year 1883, and the presidency of Dr. Millard, marked another milestone in the history of the Association and of medical practice in Minnesota. In that year, with the backing of W. W. Folwell, president of the new University of Minnesota, Dr. Millard and Dr. Hewitt organized a special examining board for physicians in connection with the University, and secured passage of another medical act. No actual medical teaching had yet been inaugurated at the University. Candidates for examination came from private schools. Each year, Dr. Millard reported to the society, at its annual meeting, on the progress of the new board. Two hundred unqualified physicians had left the state rather than face examination, he reported in 1884. In 1883, there had been 1,183 physicians in the state of whom at least one-third were irregulars. In 1886, he reported only 995 physicians remained. Of eighty-six examined that year by the board, only one had been licensed to practice. The tremendous task of standardizing medical schools and cleaning out the diploma mills was going on under the guidance of the American Medical Association and, apparently, graduates of only seventeen schools were being recognized by the Minnesota board.

In 1887, Dr. Millard, with the aid of the society, persuaded the Legislature to create an independent Board of Medical Examiners in which was vested the exclusive right to admit to practice in Minnesota. It was the first act of its kind to be adopted anywhere in the United States and it signalized the later advancement in medical licensure in Minnesota. Having cleared the way for proper licensure of its students, the University was now ready to establish its medical school and Dr. Millard set out to persuade the private schools, the Minnesota Hospital College of Minneapolis, the Saint Paul Medical College and the Minnesota College of Homeopathic Medicine,

to merge into a single department of medicine at the University.

It was thus that Dr. C. F. McComb of Duluth was able to hail the inauguration of medical teaching at the University in his presidential address of 1888. He threw the weight and influence of the organization behind the new school and Dr. Millard.

The seven league strides made in surgery during those years were facilitated, of course, by anesthesia and Listerian methods of antisepsis and by the growth of hospitals. They were also facilitated by the emergence of a series of great surgeons in all parts of the country, but especially in Minnesota. These men all took part in all activities of the society. Among them were Drs. C. A. Wheaton of Saint Paul, F. A. Dunsmoor of Minneapolis, Dr. Millard, who was Dean of the new Department of Surgery at the University, Dr. Arnold Schwyzer of Saint Paul, Dr. W. W. Mayo and his two famous sons, Drs. W. H. and C. A. Mayo of Rochester, all of whom were prominent on society programs and most of whom served as its president. In this connection, it is also interesting to note that a Minnesota surgeon, Dr. Justus Ohage of Saint Paul, performed the first successful operation in America for removal of the gall bladder.

The first mention of x-ray on any society program came in 1896. Dr. A. A. Law of Saint Paul showed the first shadowgram that year and, in 1897, appeared to be the only one in the state using the new kind of picture as an aid to diagnosis.

Membership in the society increased steadily from 119 in 1869 to 357, when Dr. Wheaton reviewed the history of the organization as president in 1889. The burning question of whether or not to admit women to membership had been discussed from time to time, with varying degrees of sarcasm and downright horror, from the year 1873 when Dr. Harriet E. Preston of Saint Paul had applied. By 1880, however, resistance had been worn down and women were admitted by a vote of thirty-nine to three.

The society continued, year after year, to affirm its adherence to the Code of Ethics of the American Medical Association. Advertising by regular practitioners had ceased fairly early; and when a member was expelled, for the first time in the history of the state society in 1891, it was for advertising. Fee splitting was also distressing the ethical and pressing for action. A resolution explicitly condemning it was passed in 1900, but it continued to plague the officials of the society.

As early as 1893, a yearly salary of $100 each, was paid to the secretary and the treasurer of the association and the dues skyrocketed in that year from $2.00 to $3.00 a year, though they were not to remain at that inflationary figure for long. In that year, also, there were county and district medical societies covering the entire state, but they were called "auxiliaries" to the Minnesota State Medical Society, and the ties between them and the state society were extremely loose.

Officers were inclined to watch in despair the successes of irregular medical cultists with the Legislature, powerless because of the lack of unity among the doctors, though the latter were far more numerous in the state.

A movement was already on foot, however, which provided for real unity and the basis for medical organization as it exists today. The American Medical Association had drawn up a constitution and by-laws for all state and county medical societies which created a close, functional relationship, at all levels of organization, and which was to become the envy of all other professional organizations. This new constitution had already been accepted in a number of eastern and southern states and was presented to the Minnesota society, officially, for the first time in 1902. Its introduction coincided with a meeting of the American Medical Association in Saint Paul. A mild preparatory measure was all that was taken at the 1902 meeting. In 1903, however, everybody seemed to be ready for the conversion and the state and county society relationship, as we know it today, came into being. Overnight, the county, instead of the state organization, became the basis and the most important unit of the state and national organization. The state was parcelled off, at the same time, into eight councilor districts with an elected representative from each making up an executive body called a Council. Each county and district society was to elect representatives, according to its size, to a House of Delegates which should meet at least annually, determine policies and elect officers. All members were to be accepted or rejected as the county unit saw fit and county and district society members automatically were accepted as members of the state and national organization.

The advantages of this close-knit organization

seem so obvious that it is difficult, now, to understand how much spadework was necessary to make it a working reality. Some members of the "auxiliary" societies were especially stiff-necked about merging their interests with others and were heard to murmur, inevitably, about "a little group" that was running things in the state society. There was, however, the scandalous situation, recognized by all, whereby a man who had been refused membership in his home society might be accepted by a distant society, which was unaware of his past, and so reap the advantages of acceptance by organized medicine.

Dr. J. N. McCormick of Bowling Green, Kentucky, chairman of the American Medical Association's committee, sparked the campaign for the new organization. He was ably seconded by many distinguished Minnesota doctors, among them, Dr. Arthur Sweeney of Saint Paul, who had served as chairman of the Society's Committee on Legislation, and who spoke feelingly of the political weakness of the profession in the state. "We are one in our antipathies," he had remarked with some bitterness in an address before the society in 1902, "and there our unanimity ends. We have no real unity of effort and, without that, our prejudices only serve to belittle us and expose us to the ridicule of the public. Our prosecution of the illegal practitioner is so ill-directed and so tinged with personal feeling as to take on the appearance in the public eye of petty persecution."

When the new plan was accepted in 1903, a real burden was placed upon the shoulders of the new councilors. Upon them, chiefly, rested the responsibility for bringing their county and district societies into the new scheme, of extending membership, of organizing new units and of explaining the objectives of the new movement.

Because the job was done well and with astonishing speed, considering the difficulties, those first councilors deserve credit and recognition. Their names and districts were as follows: First District, Dr. Eugene A. Hensel, Alexandria; Second District, Dr. Walter Courtney, Brainerd; Third District, Dr. William S. Fullerton, Saint Paul; Fourth District, Dr. Frederick A. Knights, Minneapolis; Fifth District, Dr. Harper M. Workman, Tracy; Sixth District, Dr. Alfred E. Spalding, Luverne; Seventh District, Dr. Franklin A. Dodge, Le Sueur; Eighth District, Dr. Adolph O. Bjelland, Mankato. Dr. Fullerton of Saint Paul was the first chairman.

The constitution of 1903 remains the basis of organization today, though it has been altered a little, from time to time, to meet the altered conditions of fifty years. Membership has expanded from about 400 in 1903 to 3,223, as of January, 1953. The modest budget of $4,330 has substantially increased, but so have the dues, although they were reduced to $2.00 again in 1903. Dues were to be increased only by a four-fifths vote of the House of Delegates, according to the new constitution. The program of the society, called an "association" after 1903, has expanded almost beyond the recognition of those early stalwarts, but not beyond their imagination. In their enthusiasm, they foresaw great developments for their organization when their membership should be unified.

That unification has been accomplished to a degree which is the admiration of most people, though it is viewed with alarm by those who oppose the program and aspirations of organized medicine in the United States.

The program has reached out in all directions to implement the interests of medical men. It stretches far beyond medical matters, to the education of the public, as well as the education of the physician; and to the maintenance of high standards in teaching, practice, and hospital care. It stands in the front rank of all movements calculated to improve the public health.

This expansion soon made the part-time secretary, who carried on his practice in addition to the work of the association, impractical. Dr. Thomas McDavitt of Saint Paul accepted the job on a part-time basis in 1900. He was succeeded by Dr. Earle Hare of Minneapolis and, later, by Dr. Carl B. Drake of Saint Paul, in 1921. In 1925, Dr. E. A. Meyerding took over the post in connection with his duties as executive secretary of the Minnesota Public Health Association. That arrangement was outgrown, too, and in 1938 the Minnesota State Medical Association established its own headquarters, which have since been greatly expanded, in the Lowry Medical Arts Building in Saint Paul. In that same year, Dr. B. B. Souster became secretary of the organization, with a full-time executive secretary, Mr. R. R. Rosell, as aide and operating head of the organization. This last move was in

(Continued on Page 370)

MEDICAL SCHOOLS AND MEDICAL EDUCATION OVER THE PAST CENTURY

HAROLD S. DIEHL, M.D.
Minneapolis, Minnesota

THAT GOOD medical practice depends primarily on sound medical education was officially recognized by the medical profession of this country more than a century ago when the newly established American Medical Association set the improvement of medical education as its primary objective. Achievements since that time have been truly phenomenal, so that today medical education in America is recognized as outstanding in the world.

Pioneer Medical Education

A century ago medical education in this country was truly in its infancy. The medical schools of the University of Pennsylvania, of Columbia University and of Harvard University, were established prior to 1800. However, only 20 other medical schools of the 72 currently functioning in this country were in existence a 100 years ago, and of these only three, Washington University in St. Louis, Western Reserve University in Cleveland and the University of Michigan, were in the mid-west. None was in the far west.

TABLE I. ESTABLISHMENT OF MEDICAL SCHOOLS IN THE UNITED STATES

Prior to 1800	3
1800 to 1853	20
1853 to 1903	31
Since 1903	18
Total	72

The lack of medical schools in the west, or rather of medical schools which have persisted, does not mean that prior to 100 years ago there was no medical instruction in these great areas. In those early days medical education like everything else was truly on a free enterprise basis and completely unregulated. Any physician who wished to do so could set himself up as a preceptor for the training of medical practitioners. And practically any group of physicians could start a medical school if they so desired, and many did.

Unquestionably many preceptors and many physicians who organized medical schools were sincerely and conscientiously attempting to meet the need for medical instruction in a frontier country. There is an amusing story of the preceptor of this era who told three or four students who had been studying with him for several years that their training was completed and that they were now ready to undertake the practice of medicine on their own responsibility. He explained that he had done the best he could for them. He had made his books available for their study and he had tried to teach them all that he could about the practice of medicine. But, he said, "There are two things about this that trouble me. One is, that I am sure that half of what I taught you is wrong. This troubles me, but the other troubles me more. That is, I am not sure which half it was."

Unfortunately, not all the preceptors nor all the physicians who organized medical schools were motivated by altruism. Some saw rather the obvious advantages of having the services for several years of devoted unpaid and willing assistants; some coveted the prestige of being known as a professor of a medical school; and some profited substantially from the fees paid by the students for their instruction.

Concerning this era of medical education, Abraham Flexner in his epoch-making report on Medical Education, said:

"A third type (of medical education), already so discredited as to have become absurd, is associated with the new world, where an unprecedentedly rapid expansion of population over an enormous territory created a demand for doctors long before there existed facilities for their proper training or means for their support. The inevitable happened. Loose and shifting bands of practicing physicians calling themselves a faculty, tried to impart, chiefly by lectures, to heterogeneous uneducated groups of students the empirical knowledge—sound and unsound—which they themselves possessed. First and last, American towns have produced over 400 such medical schools. . . . Pioneer conditions explain how the physicians of that day came to manufacture by the thousands doctors who had small chance to acquire either knowledge or skill. Proprietary medical schools of the United States were mainly private businesses. A few of them—Harvard and Pennsylvania—for example, were in name and in law university departments, but lacked university standards, ideals and facilities."[3]

"During this era of proprietary medical education the

Dr. Diehl is Dean of the Medical Sciences, University of Minnesota.

standards of admission were so low that Dr. Charles W. Elliott remarked, upon becoming president of Harvard in 1869, that anyone who chose could come in off the street and enter the Harvard School of Medicine. The medical curriculum consisted of courses of lectures running through four months of the year, repeated year after year. President Elliott proposed to substitute instruction which would be progressive and continue for a period of nine months each year instead of four. He further suggested that no candidate should obtain a degree without passing a strict written examination in all the chief departments of instruction, instead of five out of nine as had been previously required. The head of the Medical School was so disturbed at the changes recommended that he declared that the young president was about to wreck the school, and that it would cease to exist in a year or two if such revolutionary reconstruction were allowed. 'He actually proposed,' said this professor, 'to have written examinations for the degree of Doctor of Medicine. I had to tell him that he knew nothing about the quality of Harvard Medical students. More than half of them can barely write. Of course they can't pass written examinations.'

"At the very beginning of his Harvard presidency, Dr. Elliott began the struggle to make the Harvard Medical School a general university department in the true sense. Similar steps were subsequently taken elsewhere. The movement did not, however, gain momentum until in the last decade of the century when Johns Hopkins Medical School, a university faculty in approximately the German sense, made a success in Baltimore."[2]

In the upper Mid-West, the first charter granted to a medical school seems to have been in 1848 when the Madison, Wisconsin, Medical College was incorporated. This school never admitted any students, but later in the same year "a branch" of this college was opened at Rock Island, Illinois, under the name of the Rock Island Medical College. At the opening of this school Dean Knapp announced:

"No honor could be more congenial to my feelings, for since enduring some fifteen years of toil in the profession in Illinois to find myself at last in this El Dorado of the flow'ry West, on the banks of a river lovelier than the "Blue Moselle," presiding as accoucheur at the birth of a new institution of medical learning, pure, promising, and undefiled by perfidy, comely in every feature and limb, matchless, indeed at her birth, is to me a source of more unalloyed happiness than I could enjoy were I elected to the Chief Magistracy of a State."[4]

In spite of this oratory on the part of the dean, the school remained at Rock Island for only one term of three months, at the end of which it conferred two Doctor of Medicine degrees.

The Rock Island school moved next to Davenport, Iowa, where it was named the College of Physicians and Surgeons of the Upper Mississippi. Within a few months it moved again. This time to Keokuk, Iowa, where it obtained affiliation with the State University of Iowa. In this location it functioned for more than fifty years, until 1908, when it merged with Drake University at Des Moines. Meanwhile, in 1869, the State University of Iowa organized a College of Medicine in Iowa City. Finally, in 1913, the Drake School merged with the school at Iowa City to give the state a single strong medical school.

In Wisconsin, a second medical school was organized in Milwaukee in 1850 under the charter of the infant State University. However, this school like the one in Madison never opened its doors to students. Four years later, the Regents of the University of Wisconsin created a department of medicine, but it was not until 1907 that the first class was admitted for instruction in the basic medical sciences and not until 1925 that the clinical years of the medical course were added.

Beginnings of Medical Education in Minnesota

In Minnesota, a medical school was authorized by the territorial legislature of 1851 and by the state legislatures of 1868 and 1872. It appears, however, that the first effort in organized medical education in Minnesota was the establishment in 1871 of "The Saint Paul Medical School—Preparatory." Concerning these early days, Dr. J. A. Stewart of Saint Paul wrote:

"My earliest recollection of anything that even simulated organized medical instruction in Saint Paul was when, in 1868 or 1869, the students, reading in the different doctors' offices, met in the second story of the little stone dead-house, which stood to the left of the original building of St. Joseph's Hospital. It contained a table, chairs, and the inevitable skeleton. Dissections of amputated limbs, et cetera, from the hospital were made there, and regular instruction was given by members of the staff, of whom I recall Dr. D. W. Hand and my father."[4]

The President of the Saint Paul Medical School Preparatory was Dr. Alexander J. Stone. The course of study was four months in length and was not designed "to represent or to take the place of the work of a regular college, but to prepare the students for better understanding of the lectures they would hear in the college course." The hours of instruction were six a day, from 3:00 to 10:00 p.m.

Also, in 1871, a second medical teaching enterprise was organized in Minnesota as the Winona Medical School, Preparatory. "Both of these pre-

Dr. Perry H. Millard

paratory schools continued their missionary efforts until 1878, neither of them undertaking to do more than the self appointed task of bettering the educational status of the profession; graduating no students; conferring no diplomas; boasting no alumni; but remembered by many a physician whom they helped in their unpretentious fashion, for better understanding of and a better preparation for his life work."[4]

Upon the discontinuance of the Saint Paul Preparatory Medical School a group of the faculty organized the Saint Paul Medical School, "which had for its college building rented rooms over a saloon on Third Street, opposite and near the Metropolitan Hotel, in Saint Paul." The following year this school became the medical department of Hamline University. Initially the requirement for a degree was a course of study of two years of twenty-six weeks each. Within a few years, however, the length of the course was extended to three years.

This college was officially discontinued in 1881 when its faculty joined with other Minneapolis and Saint Paul physicians to organize the Minneapolis College Hospital. This occupied "a part of the magnificent building known as the old Winslow House, situated in east Minneapolis." The length of the college term was first announced as eighteen weeks. It was later lengthened to twenty-two weeks.

The University of Minnesota Medical School

The Regents of the University of Minnesota took the first step in the establishment of a medical school on January 5, 1883, when they authorized the organization within the University of a college or department of medicine. This department of medicine, according to the plan prepared and submitted by Dr. Charles N. Hewett, then state health officer, Dr. William H. Leonard, a prominent Minneapolis physician, and President William W. Folwell of the University, initially was a purely examining body, having no teaching functions. The legislature in this same year passed an Act to Regulate the Practice of Medicine in the State of Minnesota. This act required that physicians be licensed in order to practice within the state and conferred upon the faculty of the Department of Medicine of the University the functions of an examining board.

Also, in 1883, there was organized in Minneapolis another private medical college under the name of the Minneapolis College of Physicians and Surgeons. Twelve years later, this college became the medical department of Hamline University.

On April 7, 1887, a committee of physicians urged the Board of Regents at the University to establish a teaching school of medicine, and on January 28, 1888, the Regents accepted the offer of the trustees of the Minnesota College Hospital and the Saint Paul Medical School to surrender their charters and to use their properties for a period of five years. On March 8 of the same year, the Regents accepted the offer of the trustees of the Minnesota Homeopathic Medical College to surrender its charter to the University of Minnesota. These three colleges were combined, and the College of Medicine and Surgery of the University of Minnesota was established by the Board of Regents on March 16, 1888.

Concerning the amalgamation of these independent medical colleges into a state university medical school, Dr. Cyrus Northrop, then President of the University, in an address delivered in 1908, stated:

"The credit for organizing this college, by combining the best men of the various independent medical colleges into a new faculty of the university, and securing the retirement of independent colleges from the work of teaching, so as to give the Medical College of the University a practically clear field, belongs to Perry H. Millard, the first Dean of the College. The pertinacity,

firmness, skill and tact displayed by Dr. Millard were wonderful, and success crowned his efforts at last, although I had often thought he would fail."

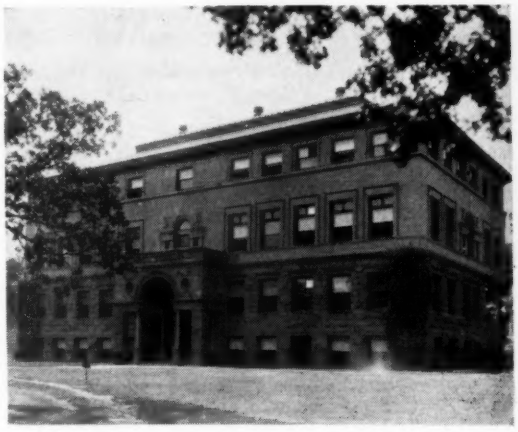
Twenty years later the other medical school in the state, which had been affiliated with Hamline University, merged with the Medical School of the State University. Since that time the presidents of the University, the members of the Board of Regents, with the aid of the deans and the medical faculty, have steered the school on an unwavering course toward the goal of the best in medical education and, through the physicians educated in the school, the best in medical service for the people whom they serve.

The Medical School was conducted until 1893 in a small building near Asbury Hospital in Minneapolis. In these early days, the school lacked laboratories and clinical facilities of its own and all of its twenty-nine faculty members had to earn their livelihood in the private practice of medicine.

The first medical building on the University campus was constructed in 1893 with some funds personally advanced by Dean Millard. This building has been occupied by the College of Pharmacy for the past forty years. Two years later a Medical Science Building, now known as Wesbrook Hall, was constructed to increase the facilities of the Medical School.

In 1912, Millard Hall, the Institute of Anatomy, and the Elliott Memorial Unit of the University Hospital were constructed south of Washington Avenue to form the first units of the new medical campus. Subsequent additions to the facilities of the Medical School include the George Chase Christian Memorial Cancer Hospital and Institute and the Todd Eye, Ear, Nose and Throat Hospital, constructed in 1924; the Eustis Children's Hospital and the University Hospitals Out-Patient Department constructed in 1929; the Psychopathic Hospital addition to the University Hospital in 1937; the Variety Club Heart Hospital in 1951, and the splendid Mayo Memorial addition now under construction.

The entrance requirements of the Medical School were originally a high school diploma or "equivalent preparation as evidenced by a special test." In 1899, the entrance requirements were raised to equal those of the "Arts College." These requirements were further increased in 1902 to one year of collegiate work; in 1908 to two years, and in 1939 to a minimum of three years of college study, with preference given to applicants for admission who have completed the requirements for an academic degree. The length of the medical course was initially three years but was increased to four years in 1895. A fifth or intern year was made a requirement in 1916.



The first medical building erected on the University Campus. Built in 1893, it is still in use. (See text.)

Minnesota—A Strong Medical School

The basic essentials for a strong medical school, beyond reasonably adequate facilities and a sound administrative organization, are a strong and energetic faculty, an able and interested student body, and adequate support. In all of these areas, Minnesota has fared well.

The faculty of the important developmental years of the school included such distinguished medical educators, teachers and scholars as the following:

In Anatomy: Dr. Clarence M. Jackson, Dr. J. B. Johnston, Dr. Thomas G. Lee, Dr. Andrew T. Rasmussen, Dr. Charles Erdmann, Dr. Hal Downey, Dr. Richard E. Scammon.

In Bacteriology: Dr. Winfred P. Larson, Dr. Arthur T. Henrici, Dr. Robert Green, Dr. Halvor Halvorson.

In Pathology: Dean Frank F. Wesbrook, Dr. Harold E. Robertson, Dr. E. T. Bell, Dr. Benjamin J. Clawson.

In Pharmacology: Dr. Arthur D. Hirschfelder, Dr. Edgar D. Brown.

In Physiology: Dean E. P. Lyon, Dr. Richard Olding Beard, Dr. Frederick H. Scott.

In Physiological Chemistry: Dr. Jesse F. McClendon, Dr. George Burr.

In Medicine: Dr. Charles Lyman Green, Dr. George D. Head, Dr. Leonard V. Rowntree, Dr. S. Marx White, Dr. Henry L. Ulrich, Dr. John P. Schneider, Dr. Hilding Berglund, Dr. Hobart A. Reimann, Dr. George E. Fahr, Dr. Moses Barron.
In Obstetrics and Gynecology: Dean Parks Ritchie, Dr. Alexander J. Stone, Dr. Jennings C. Litzenberg, Dr. John L. Rothrock, Dr. Fred Adair.
In Ophthalmology and Otolaryngology: Dr. Frank C. Todd, Dr. William R. Murray, Dr. Frank E. Burch, Dr. Horace Newhart.
In Pediatrics: Dr. Julius P. Sedgwick, Dr. Frederick W. Schlutz, Dr. Walter R. Ramsey, Dr. Frederick C. Rodda, Dr. James T. Christison.
In Surgery: Dean Perry H. Millard, Dr. Charles A. Wheaton, Dr. Frederick A. Dunsmoor, Dr. James E. Moore, Dr. Archibald MacLaren, Dr. Alexander R. Colvin, Dr. J. Frank Corbett, Dr. Arnold G. Schwyzer, Dr. Arthur A. Law, Dr. Harry P. Ritchie, Dr. Arthur C. Strachauer.
In Urology: Dr. Franklin R. Wright
In Orthopedic Surgery: Dr. Arthur J. Gillette, Dr. Emil S. Geist.
In Psychiatry and Neurology: Dr. Arthur S. Hamilton, Dr. Arthur A. Sweeney, Dr. J. Charnley McKinley, Dr. Ernest M. Hammes.
In Radiology: Dr. Robert G. Allison.

These and other devoted teachers and scholars laid the basis for and patiently developed a strong medical school which our present able faculty is carrying forward with distinction.

Medical students at the University of Minnesota have always been an able, earnest and hard working group. In recent years, the number of applicants has far exceeded the number of positions available in the class. The result has been the admission of highly selected groups of students who have made excellent records in the Medical School and in practice of their profession.

Support for the activities of the Medical School has been provided by the Legislature as part of the general University appropriation. This has been reasonably liberal in relation to the resources of the state. In recent years, however, the per student budget of the University of Minnesota Medical School has been below that of our neighboring states of Iowa, Wisconsin and Michigan. Buildings for the Medical School have been constructed in considerable part by private gifts and bequests, and four professorships have been endowed by private funds. These private contributions have been invaluable in the development of the Medical School, but the Medical School will always be dependent for basic support upon state appropriations.

What of the Future?

The Medical School of the University of Minnesota is today an institution in which its alumni, the medical profession and other citizens of the state can justifiably take pride. It is stronger than ever before, not only in medical teaching, but also in medical research—the pioneering scientific work which keeps an institution alive and progressive and brings distinction to its name. With the new buildings that are under construction, facilities will be vastly improved. Urgently needed also are a medical library building and the remodeling and enlargement of Millard Hall and the Anatomy Building. These will doubtless follow in due time. From the State of Minnesota will always come plenty of able medical students. Adequate financial support to meet increasing cost is currently a major problem, but with the continuing interest and support of the medical profession and the citizens of the state, there is every reason to hope that the necessary funds will be provided in the future as they have in the past. The total prospect, then, should be for continuing progress and distinction in medical education, medical research and medical science for the University and for the State of Minnesota.

References

1. Beard, Richard Olding: The History of Medical Education in the State of Minnesota. An Historical Evening December 8, 1908, University of Minnesota. J. Minnesota M.A. & Northwestern Lancet, 29:24-42 (Jan. 15) 1909.
2. Brown, Ester L.: Physicians and Medical Care. pp. 16-17. Russell Sage Foundation, 1937.
3. Flexner, Abraham: Medical Education: A Comparative Study. p. 41. The Macmillan Co., 1925.
4. Norwood, William F.: Medical Education in the United States before the Civil War. pp. 346-352. Philadelphia: University of Pennsylvania Press, 1944.

HEALTH EDUCATION

Health education of the public . . . . is often considered the responsibility of organized voluntary and official community agencies. Of course, it is also the physician's personal responsibility. He certainly should educate his patients and their families and do what he can as part of the community program. Health education methods have changed materially in recent years, with much greater emphasis on community organization and on helping the people to help themselves.—HUGH R. LEAVELL, M.D., *The New England Journal of Medicine*, December 4, 1952.

EIGHTY YEARS OF PUBLIC HEALTH

NETTA WILSON, M.A., M.S. and ALBERT J. CHESLEY, M.D.
Saint Paul, Minnesota

"I am happy to be able to report the organization of a State Board of Health, by the Legislature of Minnesota, in accordance with the request of this Association (State Medical Association) . . . The Board have already begun their work, encouraged by the cordial co-operation of the entire profession."

THUS did Dr. Charles N. Hewitt, first secretary of the Minnesota State Board of Health, report the creation of the board in 1872. The Minnesota board was the third to be set up in the United States. Massachusetts had created a state board of health in 1869 and California in 1871.

Throughout more than eighty years, the "cordial co-operation" of the medical society and the board of health has continued. The act creating the board provided that the Governor should appoint seven physicians as members. In 1894, a legislative amendment increased the board to nine members who were to be "persons trained in sanitary science." This change opened membership to persons other than physicians, but there have always been more physicians on the board than members of any other profession, and the board of health roster through the years contains many of the most illustrious names in Minnesota medicine.

Throughout its history, the Minnesota State Board of Health has been "remarkably free of political influence." There have been only four state health officers—Dr. Hewitt, 1872-1897; Henry M. Bracken, 1897-1919; Charles E. Smith, 1919-1921 (he died in the latter year); and Albert J. Chesley, 1921 to the present.

The Age of Discovery

The first quarter-century of the board's history constituted an age of discovery. The years from 1872 to 1897 were marked by tremendous advances in public health, despite lack of funds and limited scientific knowledge and equipment. Dr. Hewitt was alert to every new development, but at the same time always cautious in using only proved methods of disease control. From 1872 until 1893, he carried on the public health work of the state from his own small office in Red Wing, which served as administrative headquarters, laboratory, and office for his private practice. His initial salary as part-time state health officer was $200 a year, his entire appropriation $500 a year. He gave generously of his own time and his own funds to the promotion of public health. In 1893 the board's offices were moved to St. Paul, and since that time they have been located in one or both of the Twin Cities.

Chief reason for the establishment of all the early boards of health was the appalling prevalence of acute communicable diseases. In the first year of Dr. Hewitt's administration in Minnesota, there were more than a thousand cases of smallpox in the state, with 250 deaths. Typhoid fever—a disease then characterized as "of miasmatic origin"—was "very rarely absent from the state." Cholera and yellow fever were "epidemic and very fatal." Cerebro-spinal meningitis occurred widely and frequently. In the diphtheria epidemic of 1879-80, hundreds of infants and children died.

One of Dr. Hewitt's major control measures was the promotion of smallpox vaccination. In 1890, he established at Red Wing a station for the production of pure vaccine and continued to operate it for the next seven years. From this station he distributed vaccine at cost to physicians throughout Minnesota and also to the United States Army in the Department of the Dakotas. At a time when the bacterial cause of communicable disease was still regarded as a debatable theory, he made many practical observations in the epidemiology of such diseases.

In 1873, Dr. Hewitt set up a small improvised laboratory in his office at Red Wing. His early laboratory studies were limited to chemical analyses of food, milk, water, and kerosene. He continued to do this work until the state Dairy and Food Commission was created in 1885. In 1890, at his own expense, he spent six weeks of intensive study in Europe. In England and Germany, he investigated the most up-to-date knowledge of diphtheria, and in France he worked with Louis Pasteur on the control of rabies. On his return to Minnesota, he developed "one of the first bacte-

Mrs. Wilson is Senior Health Information Consultant and Dr. Chesley is Secretary and Executive Officer of the Minnesota State Department of Health.

riological laboratories concerned with human infections west of the Alleghanies." The Minnesota laboratory was also one of the first to perform the Widal test for typhoid. In 1893, the laboratory was moved to the old Mechanics Arts Building on the campus of the University of Minnesota. Dr. Hewitt did sputum examinations for suspected tuberculosis in 1891, and in 1894 he offered this service on a statewide basis.

Dr. Hewitt's services to the medical profession and the people of Minnesota were not limited to his work for the State Board of Health. He promoted the creation of an examining board for all practitioners of medicine in the state, thus freeing Minnesota from medical quacks long before their activities were suppressed in many other areas. His appointment as professor of public health at the University in 1873 was "probably the first . . . in the country." He held the post for twenty-eight years, during which he inaugurated the physical examination of all students entering the University—a novel procedure for that time. In 1891, at Dr. Hewitt's request, the federal Marine Hospital Service, forerunner of the U. S. Public Health Service, sent to the Minnesota state board of health the first notification of a case of infectious disease in a traveler bound for Minnesota. This service has continued ever since without interruption, and a similar arrangement has been made with the government of Canada.

From its earliest days, members of the Minnesota State Board of Health understood the importance of environmental sanitation. In 1875, Dr. Hewitt began the examination of samples of water, milk, and foods. In 1876, the board was hiring the services of a sanitary engineer "as needed" in order to help correct some of the extremely bad sanitation practices of the time. Dr. Hewitt described the water supply and sewage disposal systems in public institutions as "a disgrace to the state" and never ceased to urge upon state legislators and the public the need for improvement. In 1885, the Legislature empowered the state board of health to prevent the pollution of domestic water supplies.

Also in 1885, the State Board of Health was charged with the control of contagious diseases in animals. In 1897, the board appointed as head of its veterinary department Dr. H. M. Reynolds, who was a doctor of medicine as well as a veterinarian. He became the first secretary of the Live Stock Sanitary Board when it was established in 1903 and took over animal disease work in the state.

Such was Dr. Hewitt's prestige that he was able to attract to Minnesota some of the leading young pioneers in public health work in the nation. One of these was Dr. Frank Fairchild Wesbrook, who "was to add greatly to public health science in Minnesota." First employed as a bacteriologist in 1895, he remained in charge of the board of health laboratory until he was made dean of the university medical school in 1910. He served also as professor of bacteriology and pathology at the university and as a member of the state board of health. He was succeeded as laboratory director by another Minnesota pioneer, Dr. Orianna McDaniel.

Because of the prevalence of rabies in Minnesota, Dr. Hewitt on his return from Europe in 1890 had recommended the establishment of a center for diagnosing the disease in human beings and for giving the Pasteur treatment. It was not until 1907, however, that the board was finally able to obtain funds for the establishment of a Pasteur Institute, and Dr. McDaniel was placed in charge of it. The institute continued to operate until 1921, by which time antirabic vaccine was readily available for use by private physicians.

The Age of Development

The second quarter-century of public health in Minnesota saw the development and extension of the pioneer work begun by Dr. Hewitt and his associates. Those years also included the first world war and the attendant disruption of civilian public health services due to the absence of more than one-third of Minnesota's physicians and nurses on military service.

The war, however, was not without certain favorable effects on public health. For one thing, it brought to light the previously unsuspected prevalence of venereal disease. The Governor of Minnesota appointed a Social Hygiene Commission to assist in control measures. Their program was promptly co-ordinated with that of the state board of health, which in 1918 appointed Dr. H. G. Irvine to direct a comprehensive control program financed by emergency state and federal funds. This was the first occasion when federal funds were given to the states for a specific public health program. The wisdom of the innovation was doubted by some members of the medical profession, but whatever misgivings they may

have had were resolved by Dr. Irvine's handling of the program. He worked in the closest possible co-operation with the medical association, and put into practice his belief that as soon as possible the state board of health should withdraw from the treatment field and leave it to private practitioners, while continuing to give advice and help to all physicians who might need it. For thirty-five years this program has been so effectively carried out that Minnesota has had for a long time one of the lowest venereal disease rates in the nation.

Another notable advance during the age of development was in tuberculosis control. In its pioneer days, Minnesota somehow gained a reputation as "an asylum for consumptives." The result was exceptionally high death rates from tuberculosis. The highest death rate, 119.7 per 100,000 population, was recorded in 1911. Contributing to this high death rate was the great prevalence and fatality of tuberculosis among the state's Indians. At Dr. Bracken's request, the U. S. Public Health Service in 1912 conducted a thorough survey of communicable diseases among Indians. The findings of this survey were very valuable in obtaining support for future public health programs for the Indians.

In 1907, a ninety-bed state tuberculosis sanatorium was opened at Walker, especially for the care of early cases. Dr. Walter J. Marcley was its first superintendent. A legislative act of 1909 provided for the creation of county sanatoria. During the period since then, fifteen have been established and have rendered a valuable service in isolating thousands of cases and restoring many of them to health.

A State Tuberculosis Association was organized in 1906, and from then until now has promoted state-wide public education about tuberculosis and has worked with the state board of health in many other ways for control of the disease.

A highly significant factor in the reduction of tuberculosis and other health problems was the development of public health nursing. Since the early days of Dr. Hewitt's administration, the need for such nurses had been stressed by state and local health officers. A few nurses were employed in various sections of the state, but there was no provision for supervising or co-ordinating their work. In 1916, the State Board of Health authorized the employment of a state superintendent of nurses, but no funds were available to carry out the provision. In July, 1918, Miss Frances Brink was employed "to correlate the work of community nursing." This turned out to be a most timely move, for the influenza epidemic struck the state less than three months later, coinciding with a high incidence of poliomyelitis and several disastrous forest fires. This desperate situation inspired many communities to employ public health nurses. For a time, there were approximately seventy-five in the field under Miss Brink's supervision. No money was available to continue the state program after the epidemic subsided, but the need had now been recognized by the medical profession and the public. Despite many setbacks, public health nursing has progressed steadily to the position it now holds as an indispensable aid to practicing physicians.

Although epidemiology had been a major concern of all health departments since their beginning, it is believed that the term "epidemiologist" was first used in Minnesota in 1909, when the title was given officially to Dr. Hibbert W. Hill. A division of epidemiology was established by the State Board of Health on January 1, 1910.

In 1910, there were 688 deaths from typhoid fever in Minnesota. Chlorination of water supplies was started in that same year, after which typhoid showed a progressive decrease. Identification and control of chronic carriers of typhoid germs through epidemiological and laboratory services has been consistently followed since January 1, 1913.

In 1915, 300 stations for the distribution of diphtheria antitoxin were established all over the state. This move, followed in 1926 by the first diphtheria immunizations, contributed much to the control of the disease. Minnesota was one of the first states where two successive negative nose and throat cultures were required before a diphtheria patient could be released from isolation.

From 1917 until 1921, the State Board of Health was responsible for the follow-up care of persons crippled by poliomyelitis. No treatments were given other than aiding in the adjustment of braces and other appliances. "Polio teams" from the health department worked with local physicians and public health nurses to help prevent or lessen disabilities suffered by children who had polio paralysis. The board of health purchased one of the first Drinker respirators and placed it

in the University hospital for treatment of polio cases.

It was during this period of development that the board of health began to decentralize its services. One most important move in this direction was the establishment in 1905 of a branch laboratory in Duluth, with Dr. E. L. Tuohy as its director. This laboratory is still in operation.

In 1910, Minnesota became eligible on completeness of death reports to be included in the United States registration area, and in 1915 it constituted one of the ten original states comprising the U. S. registration area for births.

The Age of Consolidation

So diversified has the public health program become during recent years—the age of consolidation—that a brief record such as this can do no more than set down a few of the major landmarks of progress since the end of World War I.

Infant mortality rates decreased from 66.1 per 1,000 live births in 1920 to 2.5 in 1950. Maternal deaths decreased from 6.2 per 1,000 live births in 1920 to 0.6 in 1950. One recent development is the increasing attention being given to the prevention of accidents among children and young people. Accidents now rank first as a cause of death in all age groups from one to thirty-five years.

Communicable diseases, which caused a majority of the deaths in 1920, caused only about 5 per cent of all deaths in Minnesota in 1950. More than 75 per cent of the deaths occurring in that year were charged against chronic diseases, chiefly heart disease and cancer. The tuberculosis death rate in 1952 reached the all-time low of 6.6 per 100,000 population.

Before the first World War, Minnesota had a high venereal disease rate. By 1950, this rate was one of the lowest in the nation. Not one baby infected with syphilis was born in the state that year.

In 1918, the State Board of Health employed a physician to carry on work in child hygiene, but the program had to be suspended because of lack of funds. In 1921, the Sheppard-Towner Act made federal funds available to the states for maternal and child health, and Minnesota reestablished its program. During World War II, the Minnesota Department of Health handled more than 30,000 cases under the Emergency Maternity and Infant Care program directed by Dr. V. O. Wilson with the "cordial co-operation of the entire profession" and personal advice of Dr. Roger L. J. Kennedy.

Another recent federal-state concern was the Hospital Survey and Construction program, under which the state board of health since 1946 has administered funds to build thirty-eight new hospitals and aid a number of similar projects. This work is carried on by Dr. Robert N. Barr, Deputy Executive Officer, and Dr. Helen Knudsen, Chief of Hospital Services Section.

Chlorination of municipal water supplies has been standard procedure since 1910. In 1945, the Water Pollution Control Commission was established, making it possible for public health representatives of all states located in a particular drainage area to work together for the common benefit of their populations. Since an annual survey and rating system was started in 1946, there has been a steady improvement in the safety of the state's drinking water. A law providing for the virtual statewide pasteurization of milk became effective in 1950. The environmental sanitation program has been extended to include hotels, restaurants, and (since 1951) tourist and children's camps.

Dental health, occupational health, mental health, and health education have all been added to the health department's duties during the age of consolidation.

Although every state health officer has recognized the need for full-time local health services, there have never been sufficient funds or personnel available to establish them. As a temporary measure to decentralize its services, the health department now operates eight district offices, which since 1948 have included all counties in the state. Minnesota still has more than 1,500 local boards of health with part-time health officers, many of them receiving no pay for their public health work.

From its beginnings in 1872, with one part-time executive secretary, the Minnesota State Board of Health has grown until today it employs approximately 300 people. It carries on a program that involves in some way every resident of the state and provides services that aid the work of every practicing physician.

HISTORY OF THE MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

1851-1952

F. H. MAGNEY, M.D.

Duluth, Minnesota

THE FIRST record of an authorized body being formed to examine physicians in Minnesota is found in the territorial laws of Minnesota for 1851, where Section 5, provided:

"The medical societies established as aforesaid are hereby respectively empowered to examine all students who may present themselves for the purpose, and to grant them diplomas under the hand of the president and the seal of the society; which diploma shall constitute them members of said society; and it is hereby made the duty of the censors of each medical society carefully and impartially to examine all medical students who shall present themselves for that purpose and report their opinions in writing to the president of the society."

Section 6 of the same law provided:

"No person shall be permitted to be examined as a candidate for a diploma and membership of any of said societies, unless he shall have arrived at the age of twenty-one years, has at least a good English education, and has studied medicine at least three years with some respectable practitioner and can produce satisfactory evidence of good moral character."

It is interesting to note that the examination fee was $10.00 and an additional amount not exceeding $3.00 could be assessed "for the purpose of procuring a medical library, anatomical cabinet, chemical apparatus, or for the encouragement of useful discoveries in the science of medicine."

The possession of a diploma was not necessary, for at that time it was not a criminal offense to practice without it. It was not until eighteen years later that definite qualifications were required by law when on March 9, 1869, Section 1 of that law provided:

"That it shall be unlawful for any person within the limits of said state who has not attended at least two full courses of instruction and graduated from some school of medicine either in the United States or of some foreign country, or who cannot produce a certificate of qualification from some state, district, or county medical society, and is not a person of good moral character to practice medicine in any of its departments or perform any surgical operation for reward or compensation or attempt to prescribe medicine or medicines or perform any surgical operation for reward or compensation within the said State of Minnesota."

A penalty of a fine of not less than $50.00 nor more than $100.00 was established for the first offense and for a subsequent offense the foregoing fine and a jail sentence of thirty days. Section 3 of the same law provided that a physician file his diploma in the office of the clerk of the district court in the county in which he resides or keeps his office. One studying with a preceptor was given three years from the commencement of his course of study to comply with the provisions of the law of 1869. This law was repealed on February 24, 1870 by Chapter 47 of the General Laws of Minnesota for that year.

The first State Board of Medical Examiners was created on March 5, 1883 by Chapter 125, the General Laws of Minnesota for 1883. This law provided:

"The faculty of the medical department of the University of Minnesota shall organize as a board of examiners as herein provided, within three (3) months after the passage of this Act; they shall procure a seal, and shall receive through their secretary applications for certificates and examinations."

This law also provided:

"That any person practicing medicine in any of its departments shall present this diploma to the examining board for verification of its genuineness. If the diploma is found genuine and the person named therein be the person claiming and presenting the same, the board shall issue its certificate to that effect. If not a graduate, the person practicing medicine in this state shall present himself before said board and submit himself to such examination as said board shall require."

If the diploma was found to be genuine, the Board was permitted to charge a fee of $1.00, but if found to be fraudulent the board was permitted to charge and collect $20.00 from the applicant presenting such diploma. Candidates for examination were required to pay a fee of $5.00. A person was regarded as practicing within the meaning of the Act: "who shall profess publicly to be a physician and to prescribe for the sick or

Dr. Magney is President of the Minnesota State Board of Medical Examiners.

who shall append to his name the letters M.D." One who violated the Act was subject to a fine of not less than fifty dollars or more than five hundred dollars or to imprisonment for not less than thirty days or more than one year.

The next change in the laws was on February 28, 1887, at which time Chapter 9 of the General Laws of Minnesota for 1887 increased the State Board of Examiners to nine members and provided that they were to be appointed by the Governor. The Legislature for the first time provided the subjects for which the applicant must be examined. The subjects were: Anatomy, physiology, chemistry, histology, materia medica, therapeutics, preventive medicine, practice of medicine, surgery, obstetrics, diseases of women and children, diseases of the nervous system, diseases of the eye and ear, and medical jurisprudence. The applicant must have attended three courses of six months each. Seven members of the Board had to consent to the granting of a license. The penalty for practicing without a license was stipulated at not less than $50.00 nor more than $100.00, and by imprisonment in the county jail for not less than ten days nor more than ninety days.

In 1895, the Legislature increased the requirements to four full courses of lectures at a school recognized by the Board. This became effective on or after January 1, 1899.

Reciprocity was first recognized by the Minnesota Legislature in 1905. Section 2297 of the General Laws provided that the Examining Board may grant a license to physicians licensed to practice by a similar board in another state.

In 1911, the Legislature authorized the Medical Board to issue itinerant licenses to physicians in addition to their regular license on the payment of a fee of $300.00. However, this authorization being discretionary, the Board does not issue itinerant licenses because the granting of such a license is not in the best interest of the public.

Fee-splitting was first prohibited by law in Minnesota by Chapter 365 of the Session Laws of 1917, the law providing: "It shall be unlawful for any physician or surgeon to divide fees with or to promise a part of his fee to or pay a commission to any other physician or surgeon or person who calls him in consultation or sends patients to him for treatment or operation."

On April 15, 1919, the Legislature provided that the State Board of Medical Examiners may, with or without examination, grant a license to any physician who has satisfactorily passed the examination given by the National Board of Medical Examiners.

In 1927, the Legislature reduced the Board membership to seven and provided that the Council of the Minnesota State Medical Association might make recommendations of three physicians for each position on the new Board. It was at this session of the Legislature that the basic science law was passed. Each physician was required to register during the month of January in each year and to pay to the Board a fee of $5.00 a year for the first two years, and two dollars per year thereafter. The law authorized the State Board of Medical Examiners to expend this money in the enforcement of the Medical practice act and the basic science law. This then marked the beginning of the enforcement of the medical act as we find it today. Another requirement is that each physician must qualify for a basic science certificate as a prerequisite to securing a medical license.

The Board has the duty of examining and registering midwives. They were first registered in 1891, at which time there were 256. The present registration is twenty-one.

Masseurs have been examined and licensed by the Board since 1929, at which time licensing by their own board was discontinued. It had only been in existence since 1927. At that time there were 268 masseurs. At present there are ninety-five.

The 1951 Minnesota Legislature passed a law authorizing the registration of physical therapists, such registration being under the supervision of the State Board of Medical Examiners. At the end of 1952, 107 physical therapists had been screened and registered.

Medical licenses granted during the years 1883 through 1927, prior to the passage of the Minnesota Basic Science law, and those granted after this law was passed are as follows:

	AFFIDAVITS	EXAMINATION	RECIPROCITY	NATIONAL BOARD	TOTAL
1883 through 1927	1,707	3,972	1,257	47	6,983
1928 through 1952		4,965	863	546	6,374
TOTALS	1,707	8,937	2,120	593	13,357

From 1927 through 1952, 2,867 graduates from the University of Minnesota have been licensed.

Since 1883, 614 women physicians have been licensed; twenty-five during the year 1952.

The largest number of physicians licensed in any one year was 420. This was during 1947.

In May 1949, the Board revised its rules and regulations with reference to foreign physicians and waived the previous requirement of full citizenship and decided to admit physicians who are graduates of foreign schools on an individual basis, providing their credentials can be verified and approved. Since that time, eighty-one applicants have appeared before the Board. Of this number, thirty have passed the examination and have been licensed; nine have been authorized to take the examination; twenty-six have been authorized to take a year's graduate training at one of our approved hospitals in Minnesota; one was permitted to continue his postgraduate training at the University of Minnesota; three are pending regarding verification of credentials; one was denied; eight have not been heard from; and three have withdrawn their application. Twenty-two of the applicants are women physicians.

It was hoped that the licensing of these foreign physicians would provide the wanted medical care for less populated areas and small towns. This has not materialized. Of the thirty licensed, only five have located in small towns. Six have joined the medical staffs of Minnesota State hospitals, four are located in Saint Paul, nine in Minneapolis, and six have left the state.

The total number of physicians registered for 1952 is 6,629. Of this number, 4,031 live in Minnesota and 2,598 out of the state.

The question of the shortage of physicians, as usual, is a much discussed question. The public press, particularly, continues to stress the need for training more physicians. However, the mere training of an additional number of physicians will not insure certain localities the services of a resident physician, as economic conditions are also involved.

On April 1, 1950, the United States census showed the population of Minnesota to be 2,982,483; the state ranked eighteenth in the population of the nation and thirteenth in land area. The 1950 urban population in and around Minneapolis, Saint Paul and Duluth, numbered 1,624,914 (54.5 per cent of the state's population) and the rural population comprised 1,357,569 (45.5 per cent).

Minnesota Census (1950)

Towns	*Population*	*No. Physicians (Dec. 31, 1952)*
Duluth	104,511	165
Minneapolis	521,718	1,193
Rochester	29,885	740
Saint Paul	311,349	531
Other towns	2,015,020*	1,402
TOTALS	2,982,483	4,031

*Of this figure, 687,336 are urban, located near Minneapolis, Saint Paul or Duluth.

Ratio of Physicians to Population

1933	1 to 868 persons
1948	1 to 721 persons
1949	1 to 710 persons
1950	1 to 718 persons
1951	1 to 779 persons
1952	1 to 759 persons
1953	1 to 739 persons

Reciprocity has been established with medical boards of thirty states, and an additional twelve on a discretionary basis, making a total of forty-two. National Board diplomates are accepted in Minnesota without examination.

Since the beginning of the legal enforcement program in 1928, which was made possible with funds secured from annual registration, there have been 356 court cases. Out of this number, 319 persons were convicted. Of the thirty-seven non-convictions, fifteen were declared not guilty, fifteen cases were dismissed, two were not indicted by grand jury, three forfeited bail and two defendants died before the case was heard. The majority of these were unlicensed persons, but there were some physicians and surgeons, pharmacists, chiropractors, osteopaths, beauticians and barbers, masseurs, midwives, dentists, optometrists, registered nurses, and embalmers.

There have been 466 physicians investigated; 438 investigations have been made of persons other than physicians and surgeons. These investigations, together with the court cases, have involved abortions, infractions of the medical and basic science law, advertising laws, civil suits, sale of liquor and narcotic prescriptions, failure to reports births and deaths, excessive use of liquor, use of narcotics, fraudulent prescriptions, immorality, and other miscellaneous complaints. Some of the complaints with reference to physicians have come from dissatisfied patients, and it has been found that the physician had not been at fault.

Thirty-four medical licenses have been revoked

(Continued on Page 363)

MEDICAL JOURNALISM IN MINNESOTA

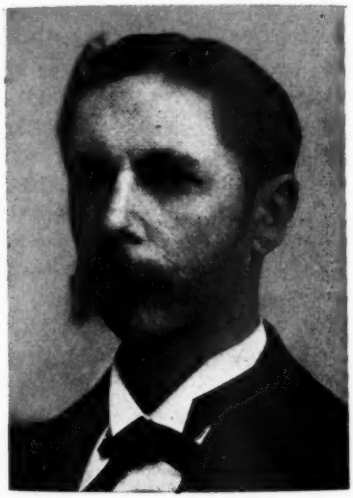
CARL B. DRAKE, M.D.
Saint Paul, Minnesota

THE HISTORY of medical journalism in Minnesota is the story of some fifteen different journals which began publication before 1900. One ceased publication after one issue. Others lasted a few months or years. All went out of existence except the *Northwestern Lancet* which was founded in 1881 by Dr. Jay Owens of Saint Paul, suddenly changed its name to the *Journal of the Minnesota State Medical Association and the Northwestern Lancet* with the appearance of the issue of November 15, 1905, and became the *Journal-Lancet* in 1912. In 1899 the *Saint Paul Medical Journal* made its appearance and continued publication until the Minnesota State Medical Association began its own publication, MINNESOTA MEDICINE, in 1918.

The numerous attempts of the various medical journals to maintain publication failed because of financial reasons—lack of sufficient advertisements and subscriptions—and perhaps a dearth of scientific material.

The first medical journal to be published in the state was the *Minnesota Homeopath* which appeared in Saint Paul in 1859. Dr. George Hadfield, a homeopath, who was the publisher, seemed to be more interested in reaching the public than in serving the profession. Probably only a few numbers appeared.

The first medical journal worthy of the name was the *Northwestern Medical and Surgical Journal* established by Dr. Alexander J. Stone in 1870. Dr. Stone was a native of Maine, had attended Harvard Medical School in 1865-66, as well as the Medical School of Maine and Berkshire Medical College at Pittsfield, Massachusetts. After a trip abroad where he visited Paris, Edinburgh, and London, he practiced with Dr. D. H. Storer in Boston for a short time. In 1869 he came west and settled in Stillwater, Minnesota, which had taken its name from Stillwater, Maine, and had been largely settled by Maine people. His idea of publishing a medical journal having received new impetus at the February, 1870, meeting of the Minnesota State Medical Society *(sic)*, the first issue of the *Northwestern Medical and Surgical Journal* made its appearance June 1, 1870. Dr. Stone was the editor and David Ramaley of Saint Paul, the publisher. In October or November of that year Dr. Stone moved to Saint Paul, which must have greatly facilitated his editorial work. The *Journal* appeared monthly and the subscription price was $3.00 a year or 35 cents a copy.



DR. ALEXANDER J. STONE

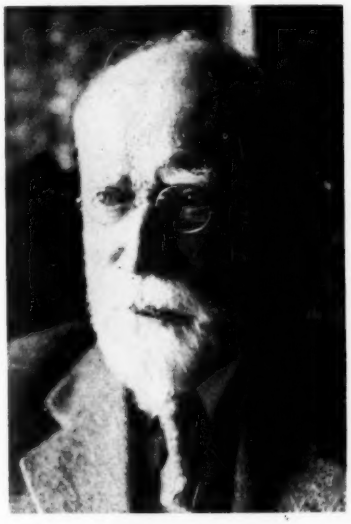
Dr. Stone was not only the first real medical editor in Minnesota; he took part in the first attempt at medical education in the state when in 1870 the Saint Paul School for Medical Education was established with Dr. Stone as secretary. As time went on, Dr. Stone became one of the leading surgeons in the state. His specialty was gynecology and he acquired an extensive and profitable practice. In 1882, when the American Medical Association met in Saint Paul, he was chairman of arrangements, called the session to order and was elected second vice president. In 1887, the University of Iowa conferred upon him the degree of LL.D. In 1872, at the age of twenty-seven he was elected vice president of the Association of American Medical Editors and later president of the association. It was not generally known that Dr. Stone had congenital dislocation of the hips which he successfully concealed by habitually wearing a Prince

Albert. He also developed Dupuytren's contracture of the palms of both hands which, however, did not prevent his operating.

Two years after establishing the *Northwestern Medical and Surgical Journal,* Dr. Stone sold it to Dr. H. C. Hand of Saint Paul who became editor with Dr. H. H. Kimball of Minneapolis as business manager. Somehow, the list of subscribers was lost in the transfer and this must have been a setback. Publication ceased in June, 1874, after four years of publication.

Another early medical publication was called the *Minnesota Medical Mirror* which was published from December, 1881, to March, 1885, in Cambridge, Minnesota, by Dr. N. M. Cook. *The Minnesota Medical Monthly,* a homeopathic organ edited by Dr. Wm. E. Leonard, was published in Minneapolis from May, 1886, to October, 1888. A Dr. Edward Fishblatt published a short-lived journal called the *Minnesota Medical and Surgical Journal* in Minneapolis from August, 1886, to March, 1887. On the title page appeared "Formerly the New York Medical and Surgical Journal." In January, 1889, one issue of the *Minnesota Medical Journal* appeared in Minneapolis under his editorship. In the library of the Ramsey County Medical Society are a few copies of the *Northwestern Medical Journal,* a monthly edited by Dr. E. N. Fishblatt of Mineneapolis, with Dr. W. Elmer Hubbard of Salt Lake City listed as Assistant Editor. It was published in Minneapolis and contained contributions from physicians all over the country. Copies dated November and December, 1891, and January, 1892, volumes 19 and 20, respectively, strongly suggest that this journal was nineteen years old in 1892. Then there was the *Medical Dial* published in Minneapolis by Dr. J. W. MacDonald from December, 1898, to December, 1903, when it was absorbed by the *Northwestern Lancet.* There was also the *Medical Argus,* published in Minneapolis as a homeopathic organ from July, 1890, to January, 1898, under the editorship of Dr. Frank Fisk Cassidy.

The *Northwestern Lancet,* the forerunner of the *Journal-Lancet,* began publication on October 1, 1881, as a semi-monthly. Dr. Jay Owens of Saint Paul was the owner and editor. Dr. Charles B. Witherle of Saint Paul became its editor in November, 1884. In September, 1886, any rights which Dr. Owens might have had in the publication were bought by Dr. Alexander J. Stone for the sum of one dollar. On the title page in 1886 appeared the name of Dr. Stone as proprietor and Dr. Witherle as editor. In 1887 Dr. Stone was listed as editor and Dr.



Dr. William Davis

William Davis of Saint Paul as assistant editor. Dr. Davis, in fact, did most of the actual editing of the journal from the time Dr. Stone acquired ownership and the names of both Dr. Stone and Dr. Davis appeared as co-editors from 1891 until 1900. Dr. William Davis was a native of Boston and a graduate of Andover and Harvard (1879). On his graduation from Andover Academy he shipped as a passenger on board a sailing vessel bound for India with a cargo of ice. The voyage was recommended by an oculist as a cure for astigmatism. Strange to relate, the ice reached India after a three months' voyage. Whether the astigmatism was corrected is not known. Dr. Davis came to Saint Paul in 1882 on account of his wife's health. He became one of the leading general practitioners in Saint Paul before he retired in 1939. He passed away in 1947 at the age of ninety-three.

In 1887, William L. Klein, a graduate of Phillips Academy and Cornell College, became business manager of the *Northwestern Lancet.* Besides being business manager he was well qualified to assist in editorial work as proven by the little volume entitled "Why We Punctuate," which he wrote and published in 1897 and which is still authoritative. After graduating from Cornell,

he became head of a Normal School at Avon, New York, and later was principal of a school at Woodstock, Illinois. Following that he founded a book publishing company in Chicago.

DR. WILLIAM A. JONES

Mr. Klein and Dr. Davis worked together as a most efficient team in the publishing and editing of the *Northwestern Lancet* from 1887 until 1899 when Dr. Davis' place was taken by Dr. Howard Lankester of Saint Paul, who in turn retired in 1901. In the December 15, 1900, issue of the *Lancet*, Dr. Stone editorially announced the severance of his connections with the journal and, in 1901, Dr. William A. Jones of Minneapolis began his editorship, which in association with Mr. Klein as publisher was to last for thirty years. The *Lancet* offices were moved to Minneapolis and Mr. Klein purchased the *Northwestern Lancet* in 1905.

In 1905 the *Northwestern Lancet* changed its name to the *Journal of the Minnesota State Medical Association and the Northwestern Lancet.* The same year it became the official organ also of the South Dakota State Medical Association and remained so until the South Dakota Association established its own state journal in 1948—the *South Dakota Journal of Medicine and Pharmacy.*

In 1912, the journal adopted the shorter title of *Journal-Lancet.* It became the official organ of the North Dakota State Medical Association in 1913 as well as for the Minnesota and South Dakota Associations. In 1918 the Minnesota State Medical Association began publication of its own journal—MINNESOTA MEDICINE—and the *Journal-Lancet* ceased to be the official organ of the Minnesota Association. In 1935, the *Journal-Lancet* became the official organ for the Montana State Medical Association, but in 1948 the Montana Association adopted the *Rocky Mountain Medical Journal* as its official organ.

Dr. William A. Jones of Minneapolis was an outstanding figure in medical circles for many years as a specialist in nervous and mental diseases and as a medical editor. A native of Minnesota, he attended grade schools in St. Peter and received his medical training at the University of the City of New York, graduating in 1881. He immediately became assistant physician at the State Hospital for the Insane at St. Peter, Minnesota. In 1883, he began the general practice of medicine in Minneapolis. After studying in Berlin and Vienna in 1886, he returned to Minneapolis and specialized in nervous and mental diseases. Besides practicing his specialty, he served on the State Board of Health for twelve years, was a clinical professor on the University of Minnesota medical school faculty and edited for thirty years the *Journal-Lancet* and its predecessors which appeared semi-monthly. He also took a very active part in medical organization. His choice of a vacation consisted in a trip to New York where he spent most of his days in his hotel room reading and his evenings at the theater. Fishing and hunting and out-door sports did not appeal to him. When twitted about his bald head, he was once heard to remark that he had early been given the choice of hair or brains and had chosen brains.

In 1929, both Mr. Klein and Dr. Jones gradually turned over the active running of the *Journal-Lancet* to others and since 1931, the year they both died, the editing of the journal has been conducted by an editorial board, with Dr. J. A. Myers of Minneapolis as chairman and Dr. Thomas Ziskin, secretary.

On the basis of Dr. Stone's ownership of the *Northwestern Medical and Surgical Journal* in 1870 and the *Northwestern Lancet* in 1886, the *Journal-Lancet* celebrated its sixtieth birthday in 1931 and its eightieth birthday in 1951, rather ignoring the period of suspended animation which occurred between 1874 and 1880.

The Proceedings of the Minnesota State Medical Association were published in pamphlet form from 1869 until 1905 when the *Northwestern*

Lancet changed its name to the *Journal of the Minnesota State Medical Association and the Northwestern Lancet.* From then on, this journal and its successor, the *Journal-Lancet,* published

DR. BURNSIDE FOSTER

the proceedings until MINNESOTA MEDICINE took over in 1918.

The Ramsey County Medical Society began the publishing of the *Saint Paul Medical Journal* in 1899. Dr. Burnside Foster, a St. Paul dermatologist, was editor-in-chief and Dr. H. Longstreet Taylor, the managing editor. On the Editing and Publishing Committee at the start were Drs. Charles A. Wheaton, Angus MacDonald, C. Eugene Riggs, J. W. Chamberlain and Arthur J. Gillette. In 1901, the name of Dr. William Davis appeared on the committee. It was announced that the journal would be published with the collaboration of outstanding physicians of Philadelphia, Boston, Baltimore, New York, Vienna, Milwaukee, Cincinnati, St. Peter, Rochester and Minneapolis.

Dr. Burnside Foster was a native of Worcester, Massachusetts. He attended Yale College and obtained his medical degree from Harvard Medical School in 1886. After a brief tour abroad, he settled in Minneapolis but moved to St. Paul after two or three years. He wrote well and besides editing the *Saint Paul Medical Journal,* he wrote on medicine for lay journals. He was credited with having originated the idea leading to the establishment of the Life Extension Institute by a number of life insurance companies.

In 1916, Dr. Foster became editor emeritus of the journal and Dr. Ernest T. F. Richards assumed the editorship, with Charles E. Smith, Jr., as secretary. An editorial board, one of whose functions was to abstract current literature for the journal, consisted of Wallace Cole, George Earl, Ernest M. Hammes, Carl B. Drake, E. Mendelssohn Jones and Harry B. Zimmerman. The Editing and Publishing Committee was made up of C. Eugene Riggs, Robert O. Earl, H. Longstreet Taylor, Warren A. Dennis and Frank J. Savage.

By the year 1916, the idea of the Minnesota State Medical Association owning its own journal had gained considerable support. In the House of Delegates that year a committee was appointed to investigate the matter. The committee appointed consisted of Dr. E. W. Buckley, chairman, George E. Senkler, R. J. Hill, J. Warren Little and Charles Scofield. The committee was directed to make its investigation and submit its findings to the county societies six months in advance of the next annual meeting of the State Association. At the meeting of the House of Delegates in 1917, Dr. Scofield presented the majority report of the committee signed by all members of the committee except Dr. Buckley, and simply stated that it was deemed inadvisable for the Association to publish its own journal. Dr. Buckley, chairman of the committee, then presented the minority report. He told of having written all the editors of the then existing twenty-eight state journals which represented thirty-three state medical associations; that the twenty he had heard from were doing well and favored the idea of a state association owning its own journal. Thus advertising would be limited to items approved by the Council of Pharmacy and Chemistry of the American Medical Association. He listed some twenty unaccepted articles advertised in the official organ of the Minnesota State Medical Association and made an impassioned plea for joining the other thirty-three states which had co-operated with the AMA in the matter of advertisements. Dr. Buckley was a fine speaker and loved to match wits with others in forensic debate. His presentation of his viewpoint took the House of Delegates by storm and at the conclusion of his speech, his motion to establish a State Association-owned

journal was carried. Dr. Robert Earl then presented the offer of the Editing and Publishing Committee of the *Saint Paul Medical Journal* to give the journal to the State Medical Association. Dr. Buckley moved that the matter be referred to a committee of five to make a report to the House of Delegates before its final adjournment. This motion was carried, and a committee consisting of Drs. J. W. Cochrane, Robert Earl, J. M. Armstrong, E. R. Hare and M. W. Smith was appointed. At a final meeting of the House of Delegates, this committee recommended the establishment of a new Association-owned journal with an Editing and Publishing Committee of five members, two to be appointed from the Hennepin County Medical Society, two from the Ramsey County Society and one from the state at large. Each Councilor District was to have one representative as an Associate Editor. The Editing and Publishing Committee was to have complete charge of the journal, select the editor, determine his compensation, et cetera., subject to the approval of the Council of the State Association.

The mere relation of the events leading up to the establishment of MINNESOTA MEDICINE fails to depict the travail which attended its birth. At the meeting of the House of Delegates in 1918, an attempt was made to rescind the action of the House the previous year which established MINNESOTA MEDICINE, on the grounds that Dr. Buckley's committee had ignored the instruction of the House in not submitting their findings to the county societies. Dr. Buckley took the floor, assumed the responsibility for failure in this point, signified his willingness to submit to the opinion of the House as to the importance of the omission, but added, "I have nothing in this world but my good name and have worked for it for thirty years, and when a man attacks my good name and charges me with being a political trickster I will follow him to the bowels of hell." MINNESOTA MEDICINE continued publication.

The first Editing and Publishing Committee of MINNESOTA MEDICINE consisted of Drs. Louis B. Wilson, Rochester; H. Longstreet Taylor and E. W. Buckley, Saint Paul, and John E. Hynes and Robert E. Farr of Minneapolis. The offer of the *Saint Paul Medical Journal* of its good will, advertising contracts and subscriptions was declined. Dr. E. T. F. Richards was selected as editor, with Ernest M. Hammes and Paul D. Berresford as Assistant Editors. Thus Minnesota became the twenty-ninth state to establish its own publication. Its purpose, as stated in the first editorial of the first issue which appeared in January, 1918, was to federate and bring into one compact organization the entire medical profession of the state of Minnesota; to extend medical knowledge and advance medical science; to elevate the standards of medical education. Lack of wholehearted support on the part of the members of the State Association has resulted in only partial attainment of the professed purpose of the journal.

Mr. J. R. Bruce of the Bruce Publishing Company, Saint Paul, was chosen as the publisher and business manager of the newly established journal. MINNESOTA MEDICINE, which was his first medical publication, was followed by numerous other medical publications in the ensuing years. Miss Irene Goette, librarian of the Ramsey County Medical Society, acted as secretary of the journal for several years until the work entailed in preparing the journal for publication was taken over by Miss Olive Seibert of the Bruce Publishing Company, who has given most efficient and co-operative editorial assistance through the years. Others in the employ of the Bruce Publishing Company sharing in the production of the journal a similar number of years are Mrs. Eva Appleby who, as secretary to the business manager, has handled advertising records and assisted in the journal make-up, and Mrs. Thomas H. Hall, who handles financial matters.

In March, 1919, shortly after my return from service in the Army, I received a letter from Dr. H. L. Taylor, president of the Editing and Publishing Committee, explaining that Dr. Richards had turned in his resignation as editor of MINNESOTA MEDICINE and requesting that I get out the April and succeeding issues of the journal until Dr. Bronson Crothers returned from Army service. I said I would; Dr. Crothers settled in Boston as a specialist in Nervous and Mental Diseases of Children and has not yet returned.

By April, 1953, exactly thirty-four years have elapsed since I got out the April, 1919, issue of MINNESOTA MEDICINE. During this period I have attended the meetings of State Medical Association secretaries and editors held almost yearly at AMA headquarters in Chicago and have received much inspiration from association with

(Continued on Page 383)

A CENTURY OF MEDICINE
1853-1953

S. MARX WHITE, M.D.
Minneapolis, Minnesota

MEDICINE as a discipline can be said truly to have begun with Hippocrates, but from the time of his death in about 355 B.C. physiologic concepts remained relatively static until the publication, in 1628, of *de Motu Cordis* by William Harvey. Harvey collected, in clear and definite form, ideas which had been stated but not confirmed by experiment.

Great names crowd the pages for the next century and a quarter. Our interest begins about 1853, the year of the founding of the Minnesota State Medical Association.

In any attempt to characterize in a journal article the progress of medical thought and practice of the past one hundred years, one must use the briefest of sketches. Hence, these vignettes will be etched about the border of the subject as indications only. The great mass, the central core, can be found only in the almost inconceivable amount of medical literature of the period from mid-century to mid-century.

Progress in medicine has been like that throughout nature and the history of man: revolutionary as well as evolutionary, with new starts in various directions, dependent on new concepts and new techniques. The physician of the nineteenth century is in process of becoming a scientist. He takes his place at the bedside of the patient. He follows the way nature has pointed out in the teaching of the biological sciences.

The nineteenth century brought a new aspect to the career of the physician. He becomes now no longer entirely dominated by systems.

Eminently experimental scientific positivist biological currents developed. The sorcerers and priests of ancient times, the astrologer or chemist of the fifteenth century, the bloodletter of the seventeenth, and the philosophizing academicians of the eighteenth have faded.

The eighteenth century had been characterized by the formation of theoretical systems. The middle of the nineteenth century found many of them still having violent advocates and corresponding opponents. In fact, remnants of some of them can be found extant today, and will persist so long as the mind of man retains its characteristic limitations. To name only a few: the animism of G. F. Stahl (1660-1734); the plethora of Hoffmann. One can still find Friedrick Hoffmann (1660-1742) Drops and Anodine which he introduced and sold at a handsome profit. One is often still importuned to use the "tonics" of his systems. John Brown (1735-1788) was the creator of Brunonism—the normal excitability of organs and the proper dosage of the stimuli thus constituting the state of health. In therapeutics sedatives were prescribed in the case of too much excitation (sthenic conditions) and stimuluation in depressed (asthenic) states.

François Joseph Victor Broussais (1772-1838) had served as an army surgeon in Napoleon's campaigns. He carried his rough schooling into his medical teaching. His therapeutics were sanguinary. Gastroenteritis was the basis of all pathology. A powerful antiphlogistic or weakening regime was adopted, the main features of which were to deprive the patient of his proper food and to apply leeches all over the body. Bloodletting became a sovereign remedy.

Franz Anton Mesmer (1734-1815) founded Mesmerism. Supporting the concept of the influences of the planets on physiological and pathological phenomena, he added to it a "magnetic therapy" derived from the ancient idea of curing by the laying on of hands. The American counterpart was the famous tractors of Elisha Perkins, a respected practitioner of Norwich, Connecticut —five guineas a pair.

Christian Friedrich Samuel Hahnemann (1758-1843) proclaimed the principle of "similia similibus curentur"—cure by drugs which produce a condition similar to the disease. Thus we have "homeopathy"—the treatment should be directed entirely against the symptoms, not against the disease. Another principle of the cult was that of potencies—successive dilutions of one in fifty, each such dilution increasing in potency until the thirtieth. The rise of homeopathy can be traced to the indiscriminate use of quinine and calomel

From the Nicollet Clinic, Minneapolis, Minnesota.
Dr. White is Professor of Medicine, University of Minnesota Medical School.

and in excessive dosage. It did no harm at a time when polypharmacy and shotgun prescriptions held sway in the ranks of regular medicine. Homeopathic physicians still had an enormous vogue as late as the beginning of the twentieth century.

P. C. A. Lewis (1787-1872) of France introduced the statistical method as a means for the scientific clinical investigation of disease. By it he was able to demolish Broussais' system.

In this period when experimental medicine was triumphantly asserting itself, but when ancient therapeutic ideas were still flourishing, we see the greatest contrasts in the history of therapy and pharmacology; on the one hand, the Viennese clinicians affirming that all treatment should be withheld in acute diseases, on the other, the disciples of Broussais who continued to practice bloodletting on a vast scale. New therapeutic fantasies, such as magnetism and homeopathy, existed along with the return to ancient methods, such as hydrotherapy, dietetics and other physiological methods. The pharmaceutical industry began to develop in Germany, England, France and the United States. Violent contests developed between those who in the treatment of febrile diseases advocated antipyretic remedies, the partisans of hydrotherapy, and those who tended toward therapeutic nihilism. Even as late as the turn of the century William Osler was reputed to be largely nihilistic in therapeutic practice. He once pointed out that there were scarcely more than a dozen and less than twenty really effective remedies in our armamentarium at that time.

Baths in various forms as therapeutic measures had survived throughout the ages. Spas and hot springs were in vogue. Dietetics was largely a matter of tradition and lacked the knowledge of body chemistry and metabolism of today. Physical therapy had its proponents but lacked the facilities and organization by which today it contributes so effectively to physical rehabilitation. Rest and exercise were known each to make a contribution toward restitution in certain fields.

Introduction of new drugs and discovery of active principles of many already in use were factors in making this an important period in pharmacology. Morphine, strychnine, quinine and atropine were in use and in 1859 Niemann first prepared cocaine. If one adds the crude preparations of mercury, iodides, iron, ipecac, alcohol, ether and chloroform the list is about complete. Pravaz described the first hypodermic syringe in 1853, thus opening up an entirely new field for the administration of drugs parenterally.

Justus von Liebig (1803-1873) had established the first laboratory of organic chemistry in connection with university teaching in 1826. He discovered hippuric acid and other uric acid compounds as well as chloral and chloroform. The most important step in establishing the new organic chemistry was the synthesis of urea by Wöhler in 1828. The scientific basis of nutrition was established by Max von Pettenkofer (1819-1901) and Karl Voit (1831-1908) who studied metabolism during activity and repose and measured oxygen consumption and heat production (calorimetry), using hermetically sealed chambers large enough to contain the animal under investigation and requiring long hours and days in the study.

Claude Bernard (1813-1878) was author of the aphorism that on entering the laboratory one should divest himself of the imagination as one does an overcoat. He was equipped with great experimental ability and constructive imagination, both greatly needed in the advance of science. He was a pioneer in endocrinology, establishing by 1857 the glycogenic function of the liver and laying the foundation for its metabolic relation to diabetes.

Ludwig von Helmholtz (1821-1894) invented the ophthalmoscope in 1851.

The most important and representative figure of the mid-nineteenth century is no doubt Louis Pasteur (1822-1895). He began as a chemist, studied fermentation by bacterial action and went on to disprove the theory of spontaneous generation which was until then a source of bitter discussion and error. His many discoveries were fundamental in medicine including the famous treatment of rabies, but the medical historian Garrison emphasized "the principle that pathogenic properties of a virus can be attenuated or heightened by successive passage through the bodies of appropriate animals led to one of the most luminous thoughts in the history of science—that the origin or extinction of infectious disease in the past may be simply due to the strengthening or weakening of a virus by external conditions."

Rudolph Ludwig Karl Virchow (1821-1902) taught pathology at Berlin until 1849 when he was forced to leave on account of his political beliefs. After seven years at Würzburg as profes-

sor of pathology he returned to Berlin having laid the basis of his epoch-making work on cellular pathology, replacing the ancient structure of humoral pathology which had dominated medicine for more than 2000 years. In 1847 he founded the journal which was to be the most famous for half a century, the *Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin.*

Robert Koch (1843-1900) discovered the tubercle bacillus in 1882. In consequence we have in our hands the means by which the "white plague" as pulmonary tuberculosis was once known—the captain of the men of death in the statistics of scarcely more than a generation ago—is being conquered. The bovine type causing the lymphatic form known as scrofula has already disappeared in those areas in our country and in the world where tuberculosis in cattle has been eliminated or where pasteurization of all milk for human consumption is compulsory.

Illustrative of the change in spirit and tempo of treatment over the centuries is the epic of "the countess powder" (pulvis comitesse). In 1638, the wife of the viceroy of Peru, the Countess of Cinchon, lay ill with an intermittent fever in the palace at Lima. A friend of her husband had learned of the virtue in fever of the bark of a certain tree and had sent a parcel of it to him. Administered by her physician, a rapid cure was effected. The tree itself was not described until exactly 100 years after the first use by the Countess, and the famous botanist Linnaeus established the genus "Cinchona" in her honor.

The plasmodium of malarial fever was discovered in 1880 by Alphonse Laveran. From then on, the application of the growing knowledge of the causative organism, the mode of transmission and methods of destruction of the organism and the vectors contributed to the world-wide conquest of the disease.

The first organized attempt to cross the Isthmus of Panama when American engineers built a railroad in 1849 to 1855 is said to have cost a life for every railroad tie, due to tropical disease. Ferdinand DeLesseps' attempt to build a canal ended in failure. Begun in 1881, it is reported that in September, 1885, the mortality reached the appalling figure of 176.97 per thousand laborers.

Col. William C. Gorgas (1854-1920) conquered yellow fever and malaria and the other tropical diseases of the Canal Zone beginning in 1904. Out of every 1,000 employes in 1906, 821 were hospitalized for malaria and in 1917—fourteen. The death rate from malarial fever per 1000 population sank from 8.49 in 1906 to 0.11 in 1918.

Since medicine in its broad sense is the art or science of restoring or preserving health, a glance at the average length of life from ancient to modern times will be illuminating. All figures prior to the establishment of governmental birth and death records, of course, are only estimates. However, from the characteristics of fossil remains of the early iron and bronze ages the average is placed at about eighteen years, representing an infant mortality which we can scarcely conceive. As estimated from mummies, the figure was around twenty-two years 2,000 years ago. The next available records are derived from inheritance of property in England in the middle ages and indicate about thirty-five years. The figures do not change essentially up to the beginning of the nineteenth century. At the beginning of the period of our study (about 1852 in England and Wales), the figure is 40.9 and at the mid period about 1900-1902 in the United States is 49.2. Comparable figures for 1945 give 65.8 and for 1951, 68.42. Thus we see that the 27.52 years of life added during this past century of scientific advance is more than all the years previously since the dawn of man. The curve rises now each year. Let us not deceive ourselves: all this advance is not due to technical medical science and art. General standards of living, adequate food supply and shelter, all play a significant part. The most significant contribution, however, is in the unprecedented diminution in maternal and infant mortality and in the suppression of the infectious diseases.

Striking evidence of the advances of medicine —in its broad sense the art or science of restoring or preserving health—is found in a comparative study of mortality from disease and from casualty in war.

Throughout history, disease and epidemics have caused far greater losses in armies than have the casualties. They have often been the determining factor in defeat. World War I, ending in 1918, saw a reversal in this picture, and World War II, together with the present Korean conflict, has seen a saving of life hitherto believed impossible.

Blood transfusions and serum intravenously, together with antibiotics, perform seeming mira-

cles. The Red Cross blood bank transmits these needed elements by airplane from the civilian pool to the theater of conflict in a matter of hours.

To recite within the narrow limits of this article the unprecedented advances of the last century and more particularly of the last fifty years is impossible. Many dates and many great names come to mind. One can sketch in only some of the most significant. No account of medicine in the western hemisphere would omit mention of William Osler (1849-1919). He was a man of wide culture, a wise clinician and was tireless in his pursuit and expositions of medicine. He became professor of clinical medicine at the University of Pennsylvania in 1885 and the first professor of medicine at the newly founded Johns Hopkins Medical School, Baltimore, in 1889. There he introduced a true bedside method of instruction in the wards where the students spent most of their time and acted as "clinical clerks." His textbook, published first in 1892, went through many editions and was the standard guide in the practice of Internal Medicine for a generation in the United States. In 1904 he became Regius Professor at Oxford. He died in 1919.

If an attempt is made to give separate consideration to diagnosis, treatment and prognosis, again confusion enters. Surgery and medicine have become inextricably mingled in that surgery is now no longer simply the removal of an offending part. Physiologic and pathologic processes are modified. The acid-producing portion of the stomach is being removed to modify digestion in duodenal ulcer. The circulation is being reconstituted in many cardiovascular conditions. Endocrine hormonal balances are being changed both by subtraction of all or part of an organ of internal secretion or by implantation of secreting tissue or injection of the hormone or its synthetic analogue.

Endoscopic technique has been developed to the point where the interior of nearly all hollow viscera and somatic cavities can be visualized. Early diagnosis is thus possible in the air passages and pleurae, the pharynx, esophagus and stomach, the anus and rectum to the sigmoid flexure of the colon, the peritoneum and the lower urinary tract. Material removed for biopsy gives opportunity for immediate microscopic assay. Positive diagnosis in many regions is furthered by the various biopsy procedures including the removal of tissue by punch. The Papanicolaou technique carried out by specially trained observers is growing in value in diagnosis of carcinoma of cervix uteri, bronchi, stomach and urinary bladder.

The roentgen ray reveals outlines of structures and cavities with remarkable accuracy. In conjunction with contrast media such as air or radio-opaque substances great diagnostic accuracy has developed and is advancing apace. The gastro-intestinal tract is compelled to reveal changes in its lumen from the oro-pharynx to the rectum. All ramifications of the bronchial tree can be studied.

The gall-bladder dye test reveals physiologic activity, malfunction and the presence—yes, even the absence—of calculi with an accuracy of approximately 96 per cent.

Kidney pelves and ureters can be outlined by means of radio-opaque substances introduced either through the blood stream or in retrograde fashion through ureteral catheters. Calculi, tumors, cysts and changes due to infection such as tuberculosis, pyelitis and ureteritis can be localized. Downward and lateral dislocation of the kidney shadow gives evidence of tumor lying above it as in the adrenal gland.

Localization of lesions in the brain and spinal cord has been greatly advanced by x-ray and electrographic methods. Pneumo-encephalography and encephalo-angiography reveal changes in the x-ray patterns within the skull. By the latter technique also the existence of intracranial aneurysms can be shown and in certain cases ligation of the internal carotid artery on the same side robs the lesion of its dangers. In a few cases local attack on the lesion is feasible.

Electro-encephalography provides a localizing mechanism in the diagnosis of cortical lesions.

Study of adrenal function can be made with accuracy. Substitution therapy with extracts and synthetic analogues can be made to sustain life. The recent production of cortisone gives us a therapeutic arm useful not only in this field but also in rheumatoid arthritis, the carditis of acute rheumatic fever and in many other fields. The influence of cortisone and ACTH on certain types of connective tissue disorder provides an instrument for the study and treatment of what has been roughly designated as the "collagen diseases."

The adreno-cortico-tropic hormone (ACTH) can be used to stimulate the adrenal cortex to put

out added amounts of a substance very similar in its action if not actually "cortisone" itself.

Physiological and physical chemistry have developed to a point where the structure of the molecule is no longer secret. Manipulation of the constituent elements permits permutations and combinations almost to infinity. Synthesis permits production of substances of purity greater than can be secured by extraction.

By introducing radio-active elements into substances which are then introduced into the body, the course and sites of deposition can be followed by the Geiger counter and other methods of determining radio-activity. Probably the most striking example in this field is found in the use of radio-active iodine in hyperthyroidism. Given by mouth it is picked up almost in its entirety by the hyperactive thyroid tissue. The "half life" of this isotope is of a few days only. During this short period great numbers of the overactively secreting cells can be destroyed. After a few days the excess radio-activity has disappeared.

X-ray therapy cures many superficial lesions even of malignant character and modifies many physiologic processes. By radium and radio-active implantation many lesions can be reached where the x-ray is inadequate.

The isolation of insulin in 1921 by Banting and Best was followed by purification and modification until the diabetic need no longer suffer the consequences of the disease. Here the art of medicine is exemplified. An effective substitute for an insulin lack is available. The art lies in persuading the patient to pursue uninterruptedly a painstaking and meticulous regime when he has no symptoms to guide him.

Another form of substitution therapy is seen in what was once called pernicious anemia. After Minot and Murphy, about 1925, found the therapeutic value of liver, refinement methods produced an extract which made continuous substitution therapy possible. Again the art of persuasion comes into play.

Our already advanced and still advancing knowledge of hormones and vitamins places in our hands therapeutic aids of great effectiveness.

Our knowledge of the sensitizations and allergies—though still very limited—gives us aid in the successful treatment of some conditions once thought to be purely nervous in origin.

Knowledge in immunology and immunizations have brought about a radical reduction in the incidence and mortality of infectious diseases. The cultivation, identification and immunology of viruses continue to be difficult, but elaborate culture techniques are overcoming our limitations.

Refinements in the preparation of digitalis glucosides have given greater accuracy and safety in the use of these remarkably useful remedies.

The laevo-rotary isomer of quinine, quinidine, gives us control of many cardiac irregularities. Other remedies controlling cardiac irregularities and tachycardia are being discovered.

The anticoagulants have a wide area of usefulness. They have assisted measurably in prevention of intracardiac thrombosis and consequent embolism in cases of myocardial infarction. They are also useful in the prevention and treatment of intravenous thrombosis such as may occur in the deep veins of the legs and less commonly in the pelvic veins. In the recumbency and lessened activity incident to heart failure, the postoperative and postpartum states, old age, anemia and similar conditions, their early and skillfully controlled use prevents much morbidity and even death from pulmonary embolism.

The sulfanilamides and antibiotics are doing in purely medicinal fields something parallel to what antisepsis (and asepsis) did for surgery, although the manner of application and the degree of effectiveness may differ. They are changing the pattern of infections by their bacteriolytic and bacteriostatic actions. Because of the wide spectrum of action of certain of the antibiotics it is becoming in many instances less necessary to identify the invading organisms. Much time and expense can therefore be avoided.

Infant mortality between 1915 and 1948 inclusive fell in the U. S. registration area from 100.2 to 31.12 per 1,000 live births. In Minnesota the fall in the same period was from 70 to 28.33. In Minnesota alone, from 1915 to 1949 inclusive, infant and neo-natal deaths combined fell from 68.8 to 31 per 1,000 live births.

Involutional melancholia introduces a hazard into the period known as "Middle Age." For the unfortunate victim, there is a morbidity period of five to seven years from which recovery usually occurs spontaneously but during which he is a burden to himself, his family and his environment. Suicide also may cost his life, or his reputation or usefulness may be irrevocably impaired. Electro-encephaloplexy, known as "electro-shock therapy" (E.S.T.), under strict control has given

an extremely high recovery rate within a period of a few weeks, thus robbing middle age of one of its greatest terrors.

The neo-modern surgery of the chest, lungs, heart and great vessels would be impossible without the newer methods of anesthesia using the physiologic effects of many drugs to control respiration, cardiac action and muscular relaxation.

Hitherto the disorders of the heart and great vessels have been susceptible only to hygienic and medicinal measures. At this point it is necessary to emphasize again the crucial part played by animal experiment in the development of the surgical techniques involved. Without the opportunity to develop dexterity and speed in operating and to learn the efficacy of techniques, no surgeon would dare invade the sacred precincts of the chest in man. Anomalous development is being corrected or compensated for, at least in part. Intrapulmonary arteriovenous aneurysms are being corrected by removal of the portion of the lung bearing the lesion.

In the past, many children who survived the neo-natal period with a malformed and malfunctioning heart and great vessels were doomed to invalidism or to death at about the age of puberty. What is now being done in rebuilding and reconstituting the circulation by surgery would have been impossible, nay unbelievable, twenty years ago. The stenosis of the pulmonary valve frequently seen alone or in combination with other congenital anomalies can be in good part corrected. Coarctation of the aorta is susceptible to surgical correction and is being recognized and corrected in early life. The surgical closure of a patent ductus arteriosus was one of the earliest triumphs in this field and provides a complete cure. The stenosed mitral valve of chronic rheumatic valvular disease is being widened by commissurotomy and other means.

The writer recently saw the photograph of a smiling, happy and healthy looking little girl of five and a half years, in whom closure of a large and incapacitating interatrial septal defect was performed by exquisitely trained surgeons. On September 2, 1952 at the Hospital of the University of Minnesota she had been anesthetized, her body temperature reduced in two hours to 26° C. This is 11° Centigrade below the normal average afternoon temperature of 37° C. or 19.8° Fahrenheit below the normal 98.6° F.

The surgical procedures took one hour and the warming after the closure took forty-five minutes. The actual suspension of cerebral circulation necessitated by the opening of the atria and suturing of the defect was not over seven minutes. By means of induced hypothermia, the oxygen requirements of the brain were thus reduced so that the function of brain cells could survive after suspension of circulation for six to seven minutes, double the survival time at normal temperatures.

This doubling of the time is adequate to allow swift delicate and dexterous intracardiac repair while cerebral circulation is suspended.

A dramatic procedure is that of opening the chest and massaging the heart into renewed activity when it has stopped beating under anesthesia.

Dorso-lumbar sympathectomy modifies in many instances the course of essential hypertension.

A striking illustration of the inextricable mingling of medicine and surgery is found in the way each complements the other in the newly developing treatment of pulmonary tuberculosis. It has been undergoing evolutionary change since the introduction of Forlanini's method of artificial pneumothorax in 1895. It was later attempted to rest the lung and close cavities by thoracoplasty and in suitable cases by phrenicectomy. Definitive treatment by removal of the diseased and cavitated areas has had to await the development of modern methods of anesthesia and the combination of surgery with the use of bacteriostatic and bacteriolytic substances but is now being accomplished.

Treatment for a period of several months by streptomycin and PAS prepares the patient. A carefully planned pneumectomy, lobectomy or segmental removal can be performed. Thus the cavitated areas which had been seeding infectious material into the environment are removed and the patient is freed from the incapacitating lesion. It is heartening to see these patients rehabilitated and seemingly cured. Many are already occupying fulltime jobs. It will take more time to learn how definitive the cure since the procedure is new. In Hennepin County's Glen Lake Sanatorium only eight such operations had been done from the time the institution was opened in 1916 to the end of 1949. Fourteen were done in 1950, 133 in 1951 and 167 in 1952. The operative mortality in this last year was 2.4 per cent. We have in our hands today the knowledge by which tuberculosis in man can be eradicated. The art consists in its application. A systematic program involving early detection in all elements of the population is imperative. Adequate treatment must be followed by rehabilitation and continuous medical

supervision. Research must be pursued to add effectiveness. Professional and lay education is needed to insure support for the program.

The fundamental principle in civilization and culture is that knowledge of one shall become the property of all. To the glory of our profession this principle has been enforced throughout the history of medicine. It underlies our medical organizations as in the component societies beginning with the county and district societies up through the state associations and finally the national, the American Medical Association founded in 1847.

Following a report on medical education in 1910 by Abraham Flexner, there has been a great improvement in medical schools. Previous to that time, there were many second and third-rate schools, private and commercial in character. The total number, including good as well as objectionable, was 148 in the United States and seven in Canada—155 in all. This has been reduced to seventy-two four-year schools with high standards. The State governments make a great contribution to this number, furnishing thirty-one of the total. Minnesota has one of the earliest and best.

Before the first World War, our opportunities for graduate education were infrequent. Now anyone desiring training beyond the intern period has no difficulty in securing it in any grade or specialty desired.

Research facilities and institutes have multiplied. The Rockefeller Institute and Hospital have exercised an influence beyond their own size and means. Research has become an integral part of the function of all medical schools whose faculties in both fundamental and clinical branches have wholetime men.

Government agencies are now taking a significant part in the research effort. The National Institute of Health of the United States Public Health Service has a group for the study of such problems as cancer, heart disease and arthritis, to mention the most important at the moment. While purposes of the National Research Council extend into all fields of the national welfare, Medicine has had a share in its support through research grants.

In recent years many leading pharmaceutical houses have not only research projects of their own but have wisely contributed to research in Universities and wherever research facilities are available. Parenthetically, one could wish they could be led to realize how much greater the benefits from this than from the inordinate amounts of money spent in flash advertising which finds its way into the wastebasket.

The modern hospital plays a large part in preserving life and in proving the value of Medicine. In it science and art unite through organization in the pooling of knowledge for the protection of the individual. Hospitals exist in almost every community. Many small towns have institutions with excellent equipment. Here they tend to be private and philanthropic. All larger municipalities maintain hospitals. Warbasse has said: "To the glory of Medicine it may be said that the quality of the institutions has not only steadily but rapidly improved." In many, use of their facilities by Medical Schools provides a strong progressive staff and research is encouraged.

To those who knew the Veterans Administration in previous years, it is gratifying to see the revolutionary improvement in that service where now research is encouraged, with the result that the care of the veteran has improved immeasurably. Reorganized under General Omar Bradley with the aid of the Committee of Deans of Medical Schools, wherever a Veterans Hospital is or can be located near enough to a medical school, staff appointments are made by the deans and research and graduate teaching are fostered. By this means, men of top quality are secured. The task ahead is to prevent deterioration because of political control.

History repeats itself in the shift of preeminence in medical education from one country to another. Italy, France, England and Germany each has had a day of leadership. That the devastation of war in Europe has hastened the shift to the North American continent seems certain. We can only pray that the arts of peace in our country will supersede those of war and that our culture will not be overwhelmed.

Bibliography

NOTE: Acknowledgement is made to many authorities on medical history, more particularly to the following:

Castiglioni, Arturo: The History of Medicine. (Translated by E. B. Krumbhaar). New York: Knopf, 1947.

Flexner, Abraham: Medical Education in the United States and Canada. Report to the Carnegie Foundation for the Advancement of Teaching, 1910.

Garrison, Fielding H.: The History of Medicine. Philadelphia: W. B. Saunders, 1914.

Warbasse, James Peter: The Doctor and the Public. Philadelphia: Paul B. Hoeber, 1935.

ONE HUNDRED YEARS OF SURGICAL PROGRESS

DONALD C. BALFOUR, M.D.
Rochester, Minnesota

THE ONE HUNDREDTH annual session of the Minnesota State Medical Association is an appropriate occasion for recording the advances in medicine which have taken place in this first century of the Association. I appreciate the invitation to review the progress of surgery during this period, for it is clear that surgery has made a notable contribution to the most conspicuous era in the history of medicine. That is, in the last one hundred years surgery has advanced more than in all preceding centuries.

The Heritage of the Past

Modern surgery is based primarily on the major revelations of Vesalius in anatomy in 1550, of the circulation of the blood by Harvey in 1628, of the work of John and William Hunter in the Eighteenth Century pertaining to inflammation, the anatomy and physiology of the lymphatic system, the healing of wounds, and the ligation of blood vessels in their continuity, of antisepsis and asepsis by Lister through his application of the discoveries of Pasteur, and of anesthesia as applied by Morton and Long.

While John Hunter found surgery a mechanical art and left it an experimental science, the doors of the new world in medicine were opened with the advent of anesthesia, antisepsis and asepsis; but the progress of surgery in the past century has depended on the progress medicine as a whole made during this period. The development of the modern hospital with the evolution of surgical departments, medical education at undergraduate, graduate and postgraduate levels, training schools for nurses, the growth of medical libraries, and the extraordinary advances of visual education and of teaching museums, all have contributed to safe and sound surgical practice. Basically, the phenomenal growth of the art and science of surgery has been made possible through intercommunication, for, as Newman has pointed out, "the progress of civilization has been primarily dependent on intercommunication, and that in the modern as well as in the ancient world this is the first element of progress and the first contributor to the saving of human life and the postponement of death, and the man who extends its scope and builds its way is contributing much to make straight the highway of health." American surgeons, recognizing this, cultivated the practice of visiting surgeons and clinics at home and abroad, always with an open mind, with freedom from national prejudice and with the ability to apply what they saw, and in this way contributed enormously to the development of surgery in America in the forepart of this century.

Dr. Balfour is an Emeritus Member of the Division of Surgery, Mayo Clinic, Rochester, Minnesota.

Contributions From the Basic Sciences

The evolution of surgery to a science as well as to an art has come through correlation of surgery with the fundamental sciences, and groundwork for this reciprocal relation lay in the anatomic schools of continental Europe during the Seventeenth and Eighteenth Centuries. Cushing, in speaking on "Fashions in Surgery" set an approximate date of 1903 "when surgeons not only in this country but in other parts of the world had begun to show an awakening of interest in pathological physiology. . . . Though isolated individuals like Hunter had done so long before, surgeons as a class for the first time had begun to think in terms of function rather than of morphology. . . . Each generation has its investigative fashions which run more or less in the grooves of least resistance or greater promise."

The development of roentgenology during the last century has had a major role in the advances in surgery, for there is scarcely a disease or a pathologic condition in which the roentgenologist cannot contribute valuable and essential information, and it is in interpretation by the experienced roentgenologist that roentgenology has become of inestimable value to the surgeon.

Modern instrument-making likewise has contributed to surgical progress and enormously advanced the major objective of early diagnosis, and has made possible extraction of foreign bodies and excision of tumors which otherwise could not have been removed.

Reduction of Mortality Rates

The evolution of the art of surgery is evidenced

by one of the greatest achievements of the present surgical era; namely, the reduced mortality rate of operations. In the early part of the century, surgery was chiefly concerned with advanced lesions, large tumors and desperate emergencies, and it was in such conditions that pioneer surgeons acquired an enormous experience, for these operations often were of great magnitude and were carried out with what we now consider inadequate facilities. And, since they were limited largely to observation in their evaluation of surgical conditions, they acquired conspicuous clinical acumen and judgment and related this basic experience to the new problems arising from the rapidly expanding scope of surgery. Today, the surgeon has available innumerable aids in basic surgical research, in diagnosis, in interpretation of findings, in surgical technique, in preoperative and postoperative care, and in evaluation of results; but, in the application of these we must not forget the extraordinary competence of those pioneer surgeons who established sound general principles and who paved the way for the achievements of present-day surgery, which has brought such great prestige to American surgery.

"Living Pathology"

The development of modern surgery has made possible, as nothing else could do, the acquisition of knowledge as to the characteristics of diseases during life. Moynihan dramatized this fact by the term "living pathology," and he referred particularly to "the enormous increase in the number of abdominal operations in the early part of this century . . . with the result that we have been enabled to construct a pathology of the living as contrasted with the pathology of the dead." This revelation of the development of lesions and their complications influenced the trend toward earlier operation in those surgical diseases which in their ordinary course are progressive, and this has resulted directly in the saving of countless lives, and surgery in this respect gave a new concept of the course of chronic disease.

Anesthesia

The extraordinary changes which have taken place in all fields of surgery in the last one hundred years have been primarily related to advances in anesthesia, which continues to make conspicuous progress through departments of anesthesiology in teaching hospitals and in providing facilities for intensive investigations of properties of new anesthetic agents, of new preparations for supportive therapy and of new methods of administration.

Similarly, modern chemotherapy has written a chapter in the history of medicine which represents benefits to mankind comparable to those conferred by Lister and Pasteur. The pioneer work of the Oxford group (Florey and his associates) in establishing the bactericidal properties and the therapeutic indications for use of the antibiotics in the prevention and treatment of surgical infections initiated a notable era in the history of surgery. The extraordinary effects of these chemotherapeutic agents have naturally led to their abuse, and their routine use will not compensate for careless technique or disregard of sound surgical principles. As Sir Alexander Fleming, to whom mankind owes an eternal debt of gratitude for the discovery of penicillin, has well said, "antibiotics simply attack the bacteria; the surgeon must treat the patient."

Special Fields of Surgery

The most salient examples of the development of new fields of surgery are in neurosurgery and thoracic surgery. More than thirty years ago, Cushing made the prediction that the neurosurgeon of his day "would have reason for amazement could he foresee the novel procedures which those of the next generation would unquestionably come to develop, for they were only at the beginning." The accuracy of this prediction is seen in the localization and removal of neoplasms of the spinal cord, the treatment of injuries to the head and of lesions of the peripheral nerves, the surgery of the sympathetic nervous system, protruded intervertebral disks and lobotomy for mental disorders. In surgery of the sympathetic nervous system, for example, if one considers the chronic diseases which in their development may be dependent on primary spasticity of arterial supply, it is not too venturesome to predict that by means of operations on the sympathetic nervous system some of the most disabling and serious diseases of modern life may be controlled.

As in neurosurgery, surgery of the thorax is an achievement of this modern era. The advances in our knowledge of the physiology of respiration and circulation, to which research in aviation gave such impetus, have contributed greatly to the safety with which operations on the lung, heart and great blood vessels can be carried out.

Disclosure by surgery of the fact that cancer of the lung is one of the more common malignant lesions, the surgical treatment of pulmonary tuberculosis by excision of the lesions, and the surgery of the great blood vessels and of congenital and acquired cardiac anomalies, mark one of the great epochs in the history of surgery.

In the earlier years of surgery of the thyroid gland, operations were confined to thyroid tumors, adenomatous and colloidal, and to those which were not associated with disturbances of metabolism. The gradual recognition and proof that certain types of diseases of the thyroid gland are responsible for profound toxic disturbances, due to perverted thyroid secretion, and the control of this by iodine, have been one of the triumphs of modern medicine, and operations for toxic adenoma and for exophthalmic goiter followed establishment of these facts.

The surgical management of diseases of the eyes, ears, nose and throat has been radically changed with the introduction of chemotherapy in the treatment of inflammatory conditions. But one of the most dramatic achievements in this field has been the fenestration operation for deafness.

Surgery of the genitourinary system has been almost entirely developed within the century. The outstanding achievements have been in the earlier surgical management of prostatic hypertrophy. In this, American surgeons have pioneered in the development of perineal prostatectomy and transurethral prostatectomy. The latter method was made possible by the introduction of new instruments of precision which in turn made possible satisfactory relief of prostatic obstruction with less disability. In surgery of the kidney and ureter, plastic operations dealing with various types of hydronephrosis have been real advances, and the success with which exstrophy of the bladder can be dealt with by cystectomy and ureteral transplantation has been a genuine surgical triumph.

The wars of this century have given impetus to all fields of surgery, particularly orthopedic surgery, plastic surgery and surgery of the blood vessels, and in the amazing expansion of the field of physical medicine.

The progress of surgery during the past century always will be identified with the advances in abdominal surgery. This has been largely due to two factors, (1) the number and variety of diseases of the abdomen, and (2) the principles of asepsis making possible safe opening of the abdomen. Earlier procedures were undertaken for the relief of serious complications, rather than for the disease itself, and the development of abdominal surgery has clarified, as nothing else could, the nature of these diseases, their course and complications, and has established the rational basis for treatment. Experience in surgery of the gallbladder and ducts has established the principle that removal of the gallbladder gives more permanent results than drainage, and the development of elaborate procedures for reconstruction of the bile ducts is a notable accomplishment. The value of education of the public and the profession in the importance of early recognition of acute disease, for example, appendicitis, is reflected in the negligible mortality rate of this disease today. The results of splenectomy for various disorders of the blood has greatly stimulated the field of hematology, since changes in the blood picture are pathognomonic in many of the diseases associated with splenomegaly.

Special Surgical Conditions

A distinct achievement in this century has been the demonstration that diaphragmatic hernia is a relatively common condition, that it is associated with a definite clinical syndrome, that the condition can be detected by a special roentgenologic examination, and that the hernia can be successfully repaired by surgery. Surgery of the esophagus for both benign and malignant lesions has made extraordinary progress in recent years, although esophageal stricture, cardiospasm and bleeding varices still present unsolved problems. The possibilities of controlling portal hypertension by various surgical procedures are still to be evaluated, but already fundamental achievements have been made. Surgery has contributed much-needed knowledge about diseases of the pancreas, and the fact that total pancreatectomy can be done with maintenance of good health opens inviting possibilities for the future.

The development of surgery of the gastrointestinal tract is a story of persistence in the face of seemingly insurmountable odds, of technical ingenuity and physiologic research, from the crudeness of the first gastrotomy as performed by Oriental surgeons to the finesse of total gastrectomy as it is accomplished today. Surgical treatment of diseases of the large bowel, particularly carcinoma, has become so highly developed that most extensive procedures, such as removal of the

entire colon, are now possible with lower rates of mortality than ever before, and with a higher percentage of permanent cures in cases of carcinoma than can be attained in the treatment of carcinoma of any other part of the intestinal tract.

Diseases of the stomach and duodenum are exceedingly common, the benign lesions alone in the aggregate being responsible for more ill health than disease of any other organ. Malignant disease of the stomach takes a heavier toll than does any other abdominal carcinoma. The chief difficulty at present in the treatment of the most common of benign lesions, namely, peptic ulcer, is inadequate knowledge as to the cause of the disease. In treatment of malignant lesions the handicap consists largely in the lack of opportunity to make an early diagnosis.

The surgery of peptic ulcer began with treatment of the complications of the disease, the most frequent indication for surgery being pyloric obstruction. It was found that such obstruction could be circumvented by gastroenterostomy, and the operation was so spectacularly successful in a high percentage of cases that it became the established procedure for duodenal ulcer, whether or not obstruction was present. Then disappointing results supervened. It soon became evident that in cases of early duodenal ulcer, particularly if the patients were young and gastric acidity was high, there was a special risk that ulcer would recur, usually in the jejunum, and in relation to the new stoma similar to that which a duodenal ulcer bears to the pylorus. Gastroenterostomy, however, continued to be employed for lesions of a type for which it had been shown by Mayo and Moynihan to be efficient. It is still indicated in carefully selected cases, for it has the advantage over all other surgical procedures for ulcer in that it is completely reversible.

Nevertheless, the disappointing results of gastroenterostomy in certain cases led to the introduction of various procedures designed to avoid use of the jejunum. The earliest of these were operations on the pyloric outlet, and they were based on the assumption that pylorospasm might be a factor not only in producing the ulcer but also in preventing its healing. By ablating the muscle and thus relieving the pylorospasm, it was thought that an ulcer which could not be removed would undergo healing and sufficiently reduce secretory activity to prevent recurrence of the lesion. After they had undergone various types of pyloroplasty, a considerable percentage of patients remained well, but the ineffectiveness of the operation in some cases was an indication for more radical procedures.

This trend in turn led to performance of partial gastrectomy, which became the operation of choice in chronic duodenal ulcer. Some sequelae of partial gastrectomy have been responsible for the employment of methods to avoid the use of the jejunum; for example, the Billroth I operation, vagotomy, pyloroplasty and various combinations of these. The recent attention which has been drawn to the usefulness of gastroenterostomy, particularly with vagotomy, is of significance. The safety with which extensive gastrointestinal operations can be carried out today is indicated in a recent report by Moroney of 100 cases in which a segment of the colon was substituted for a removed stomach. The great variety of procedures, either single or multiple, which have been suggested in the surgical treatment of peptic ulcer can be evaluated only after the passage of time. Treatment, whether medical or surgical, will continue to be empirical until the cause of the disease is known.

Comment

The future of surgery depends on recognition of the fact that superlative skill, judgment and surgical experience are the first requirements of a great surgeon. The science of surgery will rest on a still firmer foundation when its development is inspired and directed by those who are masters of the art of surgery. Whatever the future of surgery may hold, it is safe to say that the past century will be known as the surgical era. In this respect, the surgical profession of Minnesota may well take pride in the part it has had in these remarkable advances which are represented in the 100 years of the Minnesota State Medical Association. It has been the integration of sound clinical practice, a high level of undergraduate and graduate teaching, and productive clinical and experimental investigation which has brought the epoch-making contributions to the science of surgery through which the better care of the surgical patient has evolved. In all of this, the profession of Minnesota, the Medical School of the University, and the Mayo Foundation have had conspicuous parts. These foundation stones, added to those of past eras, have been well and truly laid, and it is upon these that the surgery of the future will be built.

EARLY ORTHOPEDIC SURGERY IN MINNESOTA

CARL C. CHATTERTON, M.D., F.A.C.S.
Saint Paul, Minnesota

FROM the time of Andry, the word "orthopedic" has been identified with the treatment of deformities, and an "orthopedist" has been one who treated deformity. But it was not until Stromeyer, in 1830, demonstrated the feasibility and value of subcutaneous tenotomy, that orthopedics obtained its first firm foothold in the profession. Both before and after Stromeyer's time, however, mechanico-therapy was the fundamental part of treatment of deformities. In an essay by Dr. H. J. Bigelow in 1844, in addition to clubfoot, curvature of the spine, and torticollis, he treated stammering and strabismus, and it seems clear at the date he wrote, that operative treatment was synonymous with subcutaneous tenotomy or myotomy, and that any condition requiring either of these operations was to be classified under orthopedic surgery.[4]

About 1852 an American surgeon, Dr. H. G. Davis, published an essay in which he advised the use of elastic traction by means of portable apparatus in the treatment of hip-joint disease. He also demonstrated the value of traction apparatus for overcoming the deformities occasioned by chronic articular lesions. The treatment of Potts' disease was demonstrated by Dr. Davis and Dr. C. F. Taylor. Dr. Lewis A. Sayre, along with Dr. Taylor, amplified Dr. Davis's apparatus for the treatment of chronic and progressive deformities, and under their leadership the treatment of chronic joint disease and spinal disease became a distinctive feature of the American School of Orthopedic Surgery.[13]

The most reliable way to be sure of those first interested in orthopedic surgery in Minnesota, requires a search of early articles written on various subjects that were especially orthopedic in nature, and a check of the faculties of the various institutions of medical instruction that appeared in Minnesota's infancy.

Previous to 1870, in a single room of the old stone house in the rear of St. Joseph's Hospital, a preparatory school was founded by Dr. Daniel Hand, Dr. Alex Stone, and the elder Dr. Stewart. Equipment: one pine table, a few kitchen chairs, some books, and a skeleton. Material: an occasional amputated limb handed out to them by the old hospital.[3]

In 1870, the Saint Paul School of Medical Instruction was formed by a number of Saint Paul physicians who believed greater facilities should be afforded students desiring to obtain a preparatory medical education than could be obtained from any single instructor. The object of their school was not to take the place of a regular college, but to prepare students for a better understanding of lectures they might hear in a college course. This enterprise was transferred to Minneapolis in 1878. It continued until 1885 when the faculty differed among themselves, and the Saint Paul portion withdrew and established the Saint Paul Medical College at 204 West Ninth Street.[2]

The Saint Paul Medical College claimed success because of the unusual amount of its available clinical material, and a building centrally located on the principal business street, near streetcars. The building commanding a fine view of the Mississippi, had a large comfortable lecture room, a chemical laboratory and clinical room, and a large, cool dissecting room. The lecture room was used by the Ramsey County Medical Society for monthly meetings, and to those deliberations the students were invited. The faculty was composed of: Alexander Stone, M.D., Dean and Professor of Obstetrics, Gynecology, and Medical Jurisprudence; Charles A. Wheaton, Professor of Anatomy and Clinical Surgery; Dr. F. Dedolph, Professor of Pathology and Dermatology; Dr. Talbot Jones, Registrar, Professor of Psychology and Diseases of Children; Dr. F. A. Dunsmoor, Professor of Surgery; Dr. Francis Atwood, Professor of Ophthalmology and Ototomy; Dr. James Davenport, Professor of Materia Medica and Therapeutics; Dr. Jay Owens, Professor of Theory of Practice of Medicine and Diseases of the Throat; Dr. Ernest F. Horst, Professor of Nervous Diseases and Orthopedic Surgery; and George F. Weitbrecht, Professor of Chemistry.

At a later date the St. Paul Medical College merged with the new Minnesota Medical College at Minneapolis. This college occupied a part of a

magnificent building known as the old Winslow House, situated in East Minneapolis, having a capacity of three hundred rooms. This school was formally opened on October 31, 1881.

Dr. Horst was Professor of Orthopedic Surgery in this school also.

In 1883, a plan prepared by President Folwell and others at the University[12] was presented to and adopted by the Board of Regents, creating the College of Medicine and Surgery, not as a teaching body, but as an examining body. The Legislature passed the first State law requiring all physicians to register with the faculty of this college. In 1887, the Legislature took a hand in medical affairs in the creation of an Independent Board of Medical Examiners under the first law of its type in the United States known as the Examination Law. This law discarded the diploma as evidence of medical education, and required examination of every applicant for license to practice medicine in Minnesota. In February, 1888, at Dr. Millard's instance, representatives of the faculties of the Minnesota Hospital College and Saint Paul Medical College appeared before the Board of University Regents with the offer to surrender their charters and properties in the city for the temporary use of the State. This offer was accepted, and the College of Medicine and Surgery, Homeopathic Medicine and Surgery, Dentistry and Pharmacy was established at the University. Dr. James E. Moore was elected Professor of Orthopedic Surgery.

On April 6, 1875, the Minnesota Orthopedic Institute was founded. The object of the corporation was the manufacturing and vending of mechanical surgical apparatus, and the application of such apparatus to the deformities and deficiencies of the human body, wherever surgical, mechanical or electrical apparatus appliance or movement treatment is required. The first officers were Dr. J. H. Stewart, President; Dr. E. W. Hand, Chief Surgeon; Dr. C. E. Smith, Assistant Surgeon; Dr. R. W. Sweeney, Chief Surgical Mechanic. The office was at 7 West Third street.

Dr. Jacob H. Stewart was Surgeon to the First Minnesota Regiment in 1861. On May 30, 1928, the chancel window at the new Fort Snelling Memorial Chapel was dedicated to him as a Regimental Surgeon and an outstanding figure in Minnesota politics, State Senator, Representative in Congress, Postmaster of Saint Paul, Surveyor General of Minnesota, four times Mayor of Saint Paul, Ramsey County Physician, and was apparently interested in mechanical orthopedic apparatus.

Many interesting and instructive articles were published by these early pioneer physicians. The first I have been able to discover on orthopedic surgery were as follows:

1. *Orthopedic Surgery as Applied in the Use of the Tenotome,* by Dr. A. B. Stewart, Winona, Minnesota. Northwestern Medical and Surgical Journal, 1:349-359 (May) 1871.

The article is a clever dissertation of the use of the tenotome. Dr. A. B. Stewart began its use in 1864. Principal discussion of the paper is whether to cut from without inward, or whether from within outward. He mentions muscles which might be cut by a tenotome; nothing about sterilization of the tissue or knife, nor of cold compresses after operation. Many operations were done without anesthesia of any kind.

2. *Transactions of the Minnesota State Medical Society,* Wednesday, June 22, 1881. Dr. Horst read the report of the Committee on Orthopedics. This was its first report and was illustrated by presentation to the Society of a young man and a boy, both of whom were afflicted with spinal curvature and wore the paper jacket used by Dr. Ernest F. Horst, which was claimed to be superior in various respects to the plaster apparatus introduced by Dr. Sayre.

3. *Early Diagnosis in Hip Joint Diseases* by Dr. James E. Moore. Northwestern Lancet, 8:141-144 (June 1) 1888.

This is a very classical and interesting article, and outside of the x-ray findings and present-day laboratory technique, it is modern in its conception.

4. *Orthopaedic Surgery,* by Dr. James E. Moore. Northwestern Lancet, 9:231 (Sept. 1) 1889.

5. *Treatment of Hip Joint Diseases,* by Dr. James E. Moore. Northwestern Lancet, 9:311 (Dec. 1) 1889.

6. *Orthopaedic Surgery,* by Dr. Arthur J. Gillette. Chairman of the Section. Transactions of Minnesota State Medical Society, Page 66, 1890.

7. *Prognosis in Orthopaedic Surgery,* by Dr. J. E. Moore. Northwestern Lancet, 10:18-20 (Jan. 1) 1890.

8. *Rachitis and Resulting Deformities,* by Dr.

Arthur J. Gillette. Northwestern Lancet, 10:179 (June 1) 1890.

9. *Potts' Disease,* by Dr. Arthur J. Gillette. Transactions of the Minnesota State Medical Society, Pages 183-193, 1892.

10. *Orthopaedic Surgery.* A book published by Dr. James E. Moore in 1898.

There may have been other articles published during this time by men on orthopedic subjects, but those mentioned seem to be the early papers in Minnesota.

Dr. Ernest F. Horst was born at Fort Wayne, Indiana, in 1853. In May, 1859, he came with his parents to Saint Paul and obtained his elementary education in private and public schools of the city, after which he entered Concordia College at Fort Wayne, where he studied for two years, and then spent two years at Northwestern University. He commenced the study of medicine in Saint Paul, attending Saint Paul Preparatory Medical School. From there he went to Chicago in 1874 to attend lectures at Rush Medical College. In 1876, he was graduated from the University Medical College of New York City, and the same year was appointed Junior Assistant Physician and Surgeon to the Hospital for the Ruptured and Crippled in New York City. In 1879, he returned to Saint Paul to engage in practice. He died in Saint Paul on March 26, 1909.[1] He was a man of medium stature, modest, unassuming, and capable. He did some work at St. Joseph's Hospital. His office was at Third and Maria.[10]

Dr. James E. Moore, surgeon, was born in Clarkville, Pennsylvania, March 2, 1852. He died from pernicious anemia in Minneapolis on November 2, 1918. In 1871-72 he studied medicine at the University of Michigan at Ann Arbor and took a second course at Bellevue Hospital Medical College, New York, where he was graduated in 1873. He moved to Minneapolis in 1882. In 1886, he went to Europe and when in London studied at the Royal Orthopaedic Hospital. He took special instruction in surgery, and particularly in orthopedic surgery at the New York Orthopaedic Hospital. Upon returning to Minneapolis in 1888, he confined his work to surgery—the first in the Northwest to limit himself to that specialty. He was a member of the American Orthopaedic Association, Western Surgical Society, and Southern Surgical. He was chairman of the Surgical Section of the American Medical Association in 1903. As a teacher, he was classed as one of the four great teachers of surgery in the United States. He published a text on Orthopaedic Surgery in 1898, and wrote and published over 200 papers on surgical subjects. In his early years, he was devoted to orthopedic surgery, but later, as Professor of Surgery at the University of Minnesota, taught general surgery of the highest standard.

Arthur J. Gillette was born October 28, 1863 on a farm now occupied by the Swift plant in South Saint Paul. He died in Saint Paul on March 23, 1921. He attended a rural district school, later enrolling as a student in Hamline University in Saint Paul. At twenty, he entered Minnesota Hospital College where he studied from 1883 to 1885, when he transferred to the newly formed Saint Paul Medical College, and obtained a degree in 1886. Following his graduation, he went to New York, where he took a course in the newly recognized specialty of orthopedic surgery under Dr. Sayre. He served one year as a resident in the New York Orthopaedic Dispensary and Hospital. Upon returning to Saint Paul, he began the practice of general medicine, since orthopedic surgery as a specialty was an unheard of innovation in the West. After 1890, he limited himself to orthopedic surgery. After showing the need and accomplishments by teaching the profession through practice and propaganda, he was offered an instructorship at the University of Minnesota in 1895. In 1897, he was elected Clinical Professor and in 1898 Full Professor. In 1913, he was given charge of an Independent Department of Orthopaedic Surgery. His published papers covered almost all phases of orthopedic surgery, were of careful logic, clear, and concise. He was a charter member of the American Orthopaedic Association, and its president in 1901, and was President of the Minnesota State Medical Association in 1917. Essentially conservative, he was among the first to operate for fracture of the neck of the femur. Dr. Gillette's most important work was his effort in establishing the first state-supported orthopedic hospital and school in the United States. His first known effort to secure state aid for crippled children was a paper presented before the Board of Charities and Corrections of the state, at a meeting in Mankato. The next year he appeared before the Legislature, and due to his efforts a small appropriation was approved. First a ward,

then a building was used at the City and County Hospital (Ancker Hospital) until the building of the present hospital at Phalen Park, Saint Paul, in 1911-12. At that time all the children were transferred to the institution that bears his name. When orthopedic surgery was still in its infancy, he brought Minnesota to the front rank. His vision and persistence were soon followed by other states establishing schools and hospitals for their crippled children and adults.

It is my best judgment that Dr. Ernest Fredrick Horst was the first trained orthopedic surgeon in Minnesota. Dr. J. E. Moore was the first real teacher of orthopedic surgery in the state. Dr. Arthur Gillette was the first to envision the care of the indigent cripple by the state, and through his efforts the first state-supported hospital (and school) was established.

It is impractical in an article, limited in space as this one is, to tell of the careers of the following orthopedic surgeons, now deceased, who have practiced in Minnesota: Charles Reed, Emil Geist, Alex Colvin, Albert Flagstad, Wm. Von der Weyer, Joseph Kutn, Mark Tibbits, Vernon Hart, Otto F. Schusler, Paul Geisler and N. K. Knauf. The same applies to the group of orthopedic surgeons who are now in active practice and have made valuable scientific contributions during the last half of the past century.

Acknowledgment

A great deal of information contained in this article was obtained from Dr. John M. Armstrong who completed the History of Medical Practice in Ramsey County up to 1900 (MINNESOTA MEDICINE, Vol. 21, 22) and also from Dr. Arthur Hamilton's History of Medical Practice in Hennepin County up to 1900 (MINNESOTA MEDICINE, Vol. 22, 23).

References

1. Andrews, C. C. (Ed.): History of St. Paul, Minnesota, p. 304. Syracuse, N. Y.: D. Mason & Co., 1890.
2. Armstrong, John: Personal communication.
3. Beard, R. O.: History of the Medical School. Minnesota Alumni Weekly, 20:4-6 (May 5) 1921.
4. Bigelow, H. J.: Manual of Orthopedic Surgery. A dissertation which obtained the Boylston prize for 1844 on the following question: "In what cases and to what extent is the division of muscles, tendons, or other parts proper for the relief of deformity or lameness?" Boston, 1845.
5. Kiehle, D. L.: History of Education in Minnesota. Minnesota Historical Society Collections, 10:381, 1905.
6. Kuhn, J. G., and Osgood, R. B.: American Explorers in Orthopaedic Surgery. (Pamphlet: no date, no paging).
7. National Encyclopedia, 5:388.
8. Neill, E. D.: History of Ramsey County and of the City of St. Paul, p. 367. Minneapolis: North Star Pub. Co., 1881.
9. Northwestern Lancet, 1:29 (November 15) 1881.
10. Plondke, F. J.: Personal communications, February 6, 1941.
11. St. Paul Daily Press, March 27, 1875.
12. St. Paul Pioneer Press, May 30, 1928.
13. Shaffer, N. M.: Brief Essays on Orthopaedic Surgery. New York: D. Appleton and Co., 1898.

STATE BOARD OF MEDICAL EXAMINERS

(Continued from Page 343)

and four of these reinstated since 1928. Thirty-three have been suspended, with twenty-two reinstated.

The Minnesota Basic Science law has been tested in the Minnesota Supreme Court on several occasions and has always been upheld. The right of an individual to free choice of physician has been established in Minnesota Supreme Court in several instances. A suspension of license imposed by the Board was fought by one physician to the United States Supreme Court where the action of the Board was upheld. Another hard-fought case went to the United States Supreme Court, when a layman in Minneapolis was convicted of violation of the Federal Pure Food, Drug and Cosmetic law in the sale of a product called "Powder X." His conviction was upheld, and he paid a fine. A recent opinion of the Minnesota Supreme Court held that vitamins are drugs and not food and must therefore be sold in accordance with the pharmacy laws. This eliminates the sale of vitamins from grocery or any store other than a drug store.

The Board reports all court cases in MINNESOTA MEDICINE in order that the profession may be well informed.

An annual directory of all registered physicians is printed annually and has a wide distribution among law-enforcing agencies, medical societies, insurance and business companies, universities and libraries.

The Board is fortunate in having excellent medical laws that govern its procedures and support its actions.

PROGRESS IN PEDIATRICS IN MINNESOTA

1853-1953

O. W. ROWE, M.D.
Duluth, Minnesota

WHEN the Minnesota Medical Society was organized, the field of pediatrics as a branch of medical science had not developed. The members of the new society had no information on the development of children or on their physical and mental health from infancy through childhood and adolescence. The literature—historical and current—was scanty. Some very early observations suggest that a few medical conditions were recognized, but in primitive times little value was placed on infants' lives. The only concern seems to have been the elimination of the unfit and the unwanted.

Hippocrates recorded the first observations that could have been of help to the early practitioner in the care of children. He thought that impure water and improper nutrition might be the causes of certain diseases and that cures were brought about by natural processes and that treatment should be directed towards supporting these forces. Until the 18th Century, few contributions were of value in establishing a scientific basis for practice in this field. These offerings were often highly speculative and the treatment empiric. The busy medical practitioner had to depend on his own observations and experiences in the care of children which left him almost totally unprepared to meet the demand of what must have been a large part of his practice.

More than thirty years elapsed between the foundation of the medical society and the organization of a medical school at the University of Minnesota. Progress during this period was very slow. The general practitioner was not without some pediatric assistance, however. Jacobi, the father of American pediatrics, gave the first lecture on clinical pediatrics at the College of Physicians and Surgeons in New York in 1857. This example was followed slowly by the medical colleges, and divisions of Pediatrics were formed, usually attached to the Department of Medicine, but occasionally to the Department of Obstetrics and Gynecology. Medical graduates from New England and the middle states who had had the advantage of such innovations migrated to the larger cities in our state and to the large number of small towns scattered in our rural and mining areas. These men brought with them some measure of formal professional training which stimulated those with whom they had contacts.

That the practice of pediatrics progressed slowly through this period is indicated by the first paper on this subject published in Minnesota. In the second issue of the *Northwestern Medical and Surgical Journal*, published in 1872, there appeared an essay by Brewer Mattocks, M.D., of Saint Paul, entitled "Children: Their Diseases and Treatment." The conditions inducing him to write on this subject were: "Fully one half of the deaths that occur in the daily practice of the physician are of infants—children under five years of age. Fully two thirds of the patients we are called upon to visit are children." His plea was for a more sympathetic attitude on the part of his fellow practitioners. He evidently believed that sympathy would lead to a desire of knowledge and eventually to better care of their little patients. It is regretted that his efforts failed to produce the desired results.

Progress was also very slow during the next two decades. The few contributors confined themselves largely to the symptoms and treatment of disease. Few of these publications were available until after the organization of the Section of Pediatrics of the American Medical Association in 1880. The earlier meetings of the section were concerned with such clinical problems as diphtheria and membranous croup. These reports and the entire program of the first meeting of the American Pediatric Society in 1899 became available. At this meeting there was one paper on diarrhea of infants and another on the feeding of infants. The absence of knowledge of feeding even well infants with artificial foods forced many practitioners to become ardent propagandists for maternal nursing. The feeding of the sick child was too often influenced by the

From the Department of Pediatrics of The Duluth Clinic, Duluth, Minnesota.

teaching of Broussais and others who, following purging and occasional bleeding, ended with systematic starvation.

The first orderly attempt at artificial feeding of infants was introduced by Rotch of Harvard in 1896 and was elaborated and made available to the general practitioner by Holt in the first edition of "The Diseases of Children." This was an intricate mathematical exercise requiring more knowledge than was available. "Top milk" feedings were used almost exclusively and percentages of fats, carbohydrates, and proteins meticulously calculated for each formula. All of this was extremely complicated. A chart designed by Charles Hendee Smith to simplify the problem was one of the most complex figures distributed by *Archives of Pediatrics*. Often a mother, after her baby failed to gain when following the advice of her physician, was forced to use one of the "prepared foods" available in the drug store on which her baby would gain rapidly. These prepared foods were essentially high-carbohydrate, high-calorie foods and were sold in large quantities.

It was Haubner of Leipsig, later of Berlin, whose work first placed Pediatrics on a scientific basis. With Rubner, he investigated and devised a method of estimating the complete metabolism and energy quotients in various conditions of infancy. Haubner, in addition to being a distinguished teacher and organizer of scientific investigations in the field of medicine, established a school for training men to become leaders and teachers in pediatrics. One of these, Dr. Julius Parker Sedgwick, became the first full Professor of Pediatrics in the medical school in the University of Minnesota.

The medical school of the University of Minnesota was organized in 1888. The three private medical schools of the Twin Cities surrendered their charters and later the medical school of Hamline University joined the new organization. Under the department of medicine lecturers, Dr. Charles L. Wells is listed as giving some attention to the branch then spoken of as pedology. It was not until 1895 that Dr. James Trent Christison appeared as a clinical lecturer in pediatrics. Dr. Christison was an excellent teacher and a wise counsellor in this branch of medicine. It was at his request that the hours assigned to pediatric instruction were increased from 90 to 200 hours. He maintained his interest and enthusiasm for pediatrics until he retired some forty-five years later. His first title was Assistant Professor of Pediatrics under the Department of Medicine. His last was Assistant Professor of Pediatrics, Emeritus.

Dr. Walter Reeves Ramsey appeared on the scene two years after the advent of Dr. Christison. He was an excellent teacher. He exercised his influence through his wide acquaintance and position on many boards for the advancement of the department and in ironing out differences which were bound to occur in a growing institution. One of Dr. Ramsey's greatest contributions was the organization, building and equipping of the Saint Paul Children's Hospital. This was the first hospital in the state devoted exclusively to children. The hospital, in addition to its own intensive program, gives instructions to interns of other hospitals and has many other outside activities. Dr. Ramsey is now retired with the title of Assistant Professor of Pediatrics, Emeritus. At the beginning of the century, Doctors Christison and Ramsey gave practically all of the pediatric instruction at the University Medical School.

In 1905, Dr. Julius Parker Sedgwick came to Minneapolis to practice pediatrics. He was the first man in Minnesota to limit his practice exclusively to this branch of medicine. He taught pharmacology and physiological chemistry at the University and later became interested in the development of the pediatric department. On November 3, 1915, the minutes of the Board of Regents made the following statement:

> "Voted on the recommendation of the administrative board of the Medical School to recognize as departments, the present divisions of Pediatrics and Eye, Ear, Nose, and Throat, with the understanding that this action becomes effective November 1, 1915, and that the present heads of the divisions are designated as heads of the new department."

In the *Medical School Bulletin* for 1914-1915, Dr. Julius Parker Sedgwick's title is given as Associate Professor of Pediatrics and Chairman of the Division of Pediatrics. He was promoted to full professor and chairman early in 1915 and, in November, he was named department head. Dr. Sedgwick was well equipped to evaluate and utilize to its fullest extent the enormous amount of original work done in the clinics and laboratories, both here and abroad. He was a man of

wide vision and great organization ability. He and his associates, in the brief period of eight years, established a department that ranked as one of the foremost in the nation in research and teaching. With the assistance of Professor Jennings C. Litzenberg of the Department of Obstetrics, he organized the Newborn Clinic—the first of its kind in America. Many of the investigations of this department were of immediate value to the practicing physician. One of these was the study of the comparative value of artificial feedings and maternal nursings. He succeeded in getting a large proportion of the mothers to nurse their babies. The precipitous drop in infant mortality in areas where breast nursing was established indicated a relationship between maternal nursing and the lowered mortality rate. He believed that most mothers, if encouraged and properly instructed, could nurse their babies. Dr. E. J. Huenekens, some years after this program was in effect, showed that 93 per cent of the mothers in Minneapolis could nurse their babies for three months and nearly 80 per cent to the ninth month. Professor Sedgwick's research was not limited to the newborn. He and his outstanding associates investigated many fields in Pediatrics. He edited Freers's two books on Pediatrics. In addition to the work in this department, he enjoyed a large private practice until he became a full professor and head of the Department of Pediatrics. In his private practice, he attracted a group of exceptional men, most of them trained in the European centers. These men also served in various capacities at the University. Among these was Dr. Frederick Rodda, who, after Dr. Sedgwick's death in 1923, organized the Children's Clinic in Minneapolis. Both of these clinics were large factors in the development of pediatrics in Minnesota.

After Dr. Sedgwick's death, Professor Clemens von Pirquet was elected as his successor. He remained only a short time and the vacancy was filled by Dr. Fred Schlutz, who served until 1930. He was succeeded by Dr. Irvine McQuarrie, who has been full professor and head of the department since. Under Professor McQuarrie, the Department of Pediatrics has progressed at a very rapid rate. He has affiliated the hospitals of Saint Paul and Minneapolis with the University Hospital and Children's Clinic, so he has an immense amount of clinical material for teaching purposes. While the primary function of the department is to teach, the reputation of his department will depend largely upon the research that he has stimulated and has carried through to successful conclusion. One of his larger contributions is the preparation of many of his associates for heads of departments of pediatrics in other universities. The enviable position that the Department of Pediatrics at Minnesota now holds among the leading medical schools in America is due to Professor Irvine McQuarrie. Throughout his years at the University, he has maintained a desirable and enviable relation with the general practitioner.

The men in charge of the Pediatric Department of the Mayo Clinic have made many contributions to the progress of pediatrics. The work was first under the direction of Dr. H. Z. Giffin of the Department of Medicine. He was followed in rapid succession by Drs. Archibald, Rood Taylor, M. G. Peterman, who made authoritative contributions to our knowledge of the convulsive state, and Dr. Henry F. Helmholz. The latter became Professor of Pediatrics at the Mayo Foundation and head of this section at the Mayo Clinic. He has written extensively on experimental and clinical pyelitis. In much of his work, he has had as his associate, Dr. Samuel Amberg, one of the foremost scientists in pediatrics. The head of the department is now Dr. R. L. J. Kennedy, a Minnesota graduate. He has made many valuable clinical contributions on different subjects in pediatrics.

Infant welfare clinics were established in the early part of the century in the three larger cities of the state. The work of these institutions has had a direct relation to the reduction of infant mortality. Interns from various hospitals have served under the direction of pediatricians at these clinics with excellent results.

The surgery in infants and children has made vast strides in the last two decades. Many congenital anomalies, formerly resulting in certain death, are often treated successfully in the first days of life. Congenital heart disease with new techniques can now be frequently diagnosed accurately and corrected surgically. Dr. Oswald S. Wyeth of Minneapolis was the first man to limit his practice in surgery to this field. His many contributions and demonstrations in the operating rooms have placed this specialty in pediatrics on a firm foundation in our state. Dr. T. C. Chisholm, during the few years he has been in this field, has

also made many contributions and played an important part in the development of pediatric surgery.

Progress in the field of pediatrics during the last decades has been too extensive to discuss in detail. The part that immunization has played in the reduction of contagious diseases is well known. The use of sulfanilamide drugs and later of other antibiotics have proved effective in a large number of infectious diseases. Congenital syphilis is practically eliminated. Childhood tuberculosis is seen rarely. Meningitis of many types is now susceptible to treatment. Allergic disorders can often be treated with excellent results. Progress in the study of poliomyelitis has been rapid and we are now apparently on the threshold of important new methods of prevention and treatment. The list of diseases that formerly caused the high morbidity and mortality rate of infants and children has been decreased. Many of the more serious diseases have been eliminated through fundamental discoveries relating to the causes of disease and the development of definite therapy. The results of all this is apparent in the report of Dr. Robert Rosenthal on "Infant Mortality in Minnesota," published recently in this magazine. As a great majority of sick infants and children are treated by the general practitioner, it is quite obvious that they, as a group, are familiarizing themselves with the advances and research in pediatrics and the newer techniques of examination and treatment of their patients.

Progress in the field of pediatrics in Minnesota has been intimately related to the ideals, accomplishments, and personalities of many pediatricians. Since the beginning of the Golden Age of Pediatrics in the latter part of the 19th century, no branch of medicine parallels this movement aimed at finding some of the answers to the problems relating to the cause of disease and the better distribution of new methods and medical knowledge.

AVERAGE PHYSICIAN WRITES 2,500 PRESCRIPTIONS A YEAR

The average physician in private practice today writes 2,517 prescriptions a year, or one for every three patients.

This is revealed in the March issue of *Medical Economics*. The magazine is publishing the results of a nationwide survey of medical practice, based on a questionnaire sent to each of its 134,000 physician readers.

The survey suggests that the amount of prescribing a doctor does may be substantially influenced by the length of time he has been in practice. At any rate, the young doctor (one with less than ten years' experience) tends to write about 70 per cent more prescriptions a year than the medical man with thirty or more years' experience—even though both men treat about the same number of patients.

The following table breaks down physicians' prescribing habits by community size:

Community Size	*Prescriptions Yearly by Average M.D.*
Under 5,000	2,824
5,000-49,999	2,948
50,000-499,999	2,508
1,000,000 and over	1,848

Medical Economics also investigated the extent of dispensing by physicians. It found that 45 per cent of the doctors surveyed dispense some or all of the medicines they tell patients to take; these dispensing physicians dispense, in the aggregate, 35 per cent of all the drugs they prescribe.

MODERN OTOLARYNGOLOGY AS A SPECIALTY

LAWRENCE R. BOIES, M.D.
Minneapolis, Minnesota

PROBABLY there is no specialty that has undergone so much change because of modern progress in the control of infection as has the specialty of otolaryngology. This change has occurred in the past fifteen years. Prior to that time, the complications of infection in the upper respiratory tract were almost constant problems of the otolaryngologist, particularly in the winter and spring months. Today, acute mastoiditis needing surgery, phlebitis or thrombosis of the lateral sinus, meningitis or brain abscess from ear or sinus infections, osteomyelitis of the frontal bone, or of the maxilla, the peritonsillar and pharyngeal abscess formations, and obstructive laryngitis are relatively uncommon and in some places rare in occurrence.

In spite of this change, chronic infections of the middle ear and mastoid are still seen in considerable quantity. One of the reasons for this is the fact that chronic inflammation in this structure is not necessarily dependent upon an acute process as a precursor, but rather upon the type of mucosal lining involved. When there is a poor pneumatization of the temporal bone either through hereditary factors or neonatal infections, this mucosa tends to be hyperplastic and poorly resistant to infection. In this circumstance an infection reaching the middle ear may be destined to chronicity from its beginning.

Another factor in the development of chronic infection in the temporal bone seems to be the current use of antibiotic therapy without consideration for drainage when secretion has formed in the middle ear and mastoid.

Though these changes in the incidence of complications of infection in the upper respiratory tract have occurred, the specialty of otolaryngology has through new advances developed so many activities that it is difficult for anyone to be entirely competent in all phases of the specialty. This will be apparent if one examines in detail some of the modern activities in otology, rhinology and maxillofacial conditions, laryngology, and broncho-esophagology.

Otology

Surgery on the temporal bone is now performed with much greater skill than it was a decade or two ago. Probably there is no more exacting surgery in any field of medical practice than the fenestration operation for clinical otosclerosis. It was through the development of this operation that temporal bone surgery improved. The otolaryngologist who equips himself to do this work usually finds a broad opportunity to apply the fundamentals of this technique in the surgery of otosclerosis, to chronic suppurations, and to the less common conditions such as atresia of the external auditory canal and in certain cases of endolymphatic hydrops, when surgery is indicated.

There is, of course, a large field of activity in otology that is not surgical. In spite of marked improvement in the control of the acute infections that contribute to hearing loss, the total incidence of this impairment seemingly has not diminished. Probably this is because the incidence from some of the causes has increased in modern times. One is the hearing loss due to acoustic trauma in the form of industrial noise. Also, it seems that the incidence of hearing loss due to a serous otitis media may be more common than formerly. This condition may be caused by an acute interference with ventilation of the middle ear from tubal closure. This results in a transudation of serum. Or, an exudate develops in the middle ear as the result of inflammation or allergic phenomena. Unrecognized and untreated, fibrosis and adhesive processes develop in the mucosa. This may contribute to a permanent loss of hearing of a moderate degree.

Some of this apparent increase in the incidence of hearing loss may be due to the fact that modern methods of testing and the widened use of these tests have revealed more instances of hearing impairment. The audiometer is now widely used for screening tests in schools and as a part of pre-employment physical examinations.

The application and interpretation of modern clinical tests for hearing, and the rehabilitation of those whose hearing loss cannot be helped by medical or surgical means constitutes in itself a large field of activity. Though a considerable part of this work need not be carried on by a clinician, he must give it direction and some supervision.

In addition, he must assume responsibility in advising preventive measures to lessen the incidence of some causes of perception deafness.

A new insight into inner ear problems has developed in the last decade. Vertigo, tinnitus and perceptive loss are common symptoms and seem to be on the increase. In many instances, these symptoms can be interpreted in terms of neurovascular phenomena. This has opened up a fascinating field of inquiry and emphasized to the otologist the importance of a broad knowledge of fundamental physiology.

Rhinology

The fact that acute infections of the upper respiratory tract caused by pyogenic organisms can now be so well controlled means that the modern rhinologist is not confronted with as much suppuration in the nasal space as he was a decade or two ago. Nevertheless, symptoms related to the nasal space are still very prevalent and probably as common as ever. Head pain, congestive states and hypersecretion in the nasal space are daily problems to the rhinologist. Some instances of these symptoms result in some degree from the stress and strains of modern living. Neurovascular phenomena as a factor in head pain and congestive states not dependent on inflammatory processes have been clarified through the work of numerous investigators. The modern rhinologist interprets the vasomotor changes occurring in the nose as the result of allergic phenomena, or as the result of one or more of a variety of human experiences much more accurately than was the case when his training was focused on surgical opportunities.

This does not mean that there is no place for rhinologic surgery. Nasal injury from trauma has certainly not decreased. Skill in the correction of deformities of the external nose and particularly in the deformities of the dislocated nasal septum has increased. The rhinologist who is trained in the fundamentals of plastic surgery and who has a knowledge of and experience in the management of defects in nasal respiration is ideally equipped for the management of these abnormalities. Likewise, this is true of maxillo-facial injury.

There are conditions in the nasal sinuses requiring highly developed technical skill in their surgical management. These are such conditions as the subacute or chronic antrum infection requiring an intranasal antrostomy, the ethmoid state in which exenteration for chronic infection or polyposis is advisable, certain chronic sphenoid or frontal sinus suppurations, osteomas, mucoceles, and malignant disease in various parts of the nasal space.

Laryngology and Broncho-esophagology

The "throat" is the domain of the trained otolaryngologist by right of technical skill and experience in managing the numerous disorders creating symptoms in this area. Here the most common activity from the standpoint of incidence is tonsil and adenoid surgery. Historical accounts indicate that the surgical treatment of the tonsil dates back nearly 3,000 years, yet this subject is controversial today. Two facts probably account for the differences of opinion. The first is that the removal of tonsils and adenoids is often recommended from superficial observation. Secondly, it is considered to be a minor operation and for that reason is undertaken by those who have not acquired skill and training in working in this area. This could account for the fact that in terms of end results, this surgery may not produce the benefits expected, that it is often inadequately done, that the morbidity associated with the operation may be quite significant and that even mortality occurs. The most difficult part of this surgery may be the management of the lymphoid tissue of the nasopharynx in children where particular attention must be paid to the lymphoid folds laterally that obstruct the choanae to produce continued mouth breathing even though the central adenoid mass is removed, or contribute to middle ear disease through blockage at the Eustachian orifices.

Though the modern laryngologist sees relatively few of the abscess formations that once were common in the throat and rarely encounters luetic or tuberculous conditions in an ordinary practice, the incidence of patients who complain of throat symptoms seems to be on the increase. This means that the skilled laryngologist must possess a broad understanding of the various phenomena that might produce vague throat symptoms without local objective evidence of disease, as well as an ability to detect the early changes in malignant disease. He must possess a knowledge of psychosomatic possibilities and the symptoms associated with the tensions of modern living, the phobias that can easily develop through the

propaganda for the early detection of cancer, and the neurovascular phenomena producing pain along vascular pathways. No one is better equipped for this than the laryngologist who in training and experience can use the instruments for a complete visualization of the pharynx in both its upper and lower extents, and correctly interpret his findings.

The incidence of laryngeal neoplasms has certainly not decreased. Benign tumefactions of the vocal cords are common and if skillfully handled result in the restoration and preservation of a good voice. Malignant lesions can now be eradicated in a high percentage of cases with good conservation of function. Even when a total removal of the larynx is necessary, the modern developments in speech following laryngectomy offer satisfactory means of communication.

In advanced cases of carcinoma involving the larynx and lower pharynx many lives can be salvaged because modern anesthesia and supportive care, plus new surgical skills, have made a radical removal of these extensive malignant lesions possible.

The modernly trained otolaryngologist is equipped to treat practically all the soft tissue conditions in the neck, exclusive of the thyroid gland. The latter is not included in most training programs even though the more formidable undertaking of total laryngectomy with neck dissection is, and in this procedure the thyroid gland has to be handled surgically as well as in certain cases in which a tracheotomy is performed.

An arytenoidectomy for relief from the respiratory obstruction in bilateral vocal cord paralysis is one of the advances of modern laryngology. The operation is a relatively minor one; an adequate air way can be provided with preservation of a useful voice.

Obstructive laryngitis seems to be less common today than before the advent of the sulfonamides or antibiotics. The employment of these drugs in the environment of high humidity in a controlled temperature has lessened the need for relief in the form of tracheotomy. Often, however, the diagnostic interpretation of an examination by a trained laryngologist is highly important.

Education seems to be lessening the incidence of foreign bodies in the air and food passages, and the skills of the experienced broncho-esophagologist have decreased the seriousness of these accidents. However, the diagnostic procedures related to endoscopy in suspected pulmonary or esophageal disease are more commonly employed. Accurate bronchography, the visualization of obscure lesions through telescopic lens inserted through the bronchoscope, and the early detection of malignant disease are accomplishments of modern broncho-esophagology.

In spite of the progress that has been made, otolaryngology has many unsolved problems. In this challenge there is an appeal. Researches by Minnesota otolaryngologists have made a solid impact on the trend of this specialty. Notable among these have been the contributions of Anderson Hilding, Jerome A. Hilger and Henry L. Williams.

ORGANIZED MEDICINE IN MINNESOTA

(Continued from Page 331)

accord with the practice of a number of forward-looking state associations and large county societies all over the country that were engaging trained lay secretaries to carry on their work.

Today, the Minnesota State Medical Association stands, at its centenary, in a position of organized strength and power which could hardly have been dreamed of on that July morning in 1853.

But the objectives of that hardy handful of pioneers, as expressed in the first constitution adopted that day, do not differ greatly in expression or content from the objectives of the doctors of Minnesota in 1953.

They read as follows:

"To advance medical knowledge, to elevate professional character, to protect the interests of its members, to extend the bounds of medical science, to protect all measures adopted to the relief of the suffering and to improve the health and protect the lives of the community."

OPHTHALMOLOGY IN THE PAST CENTURY

ERLING W. HANSEN, M.D.
Minneapolis, Minnesota

THE PAST CENTURY has seen the development of medicine and surgery to a very high degree. Ophthalmology has shared in this general advance in pathology and bacteriology, biochemistry, anesthesia, and roentgenology and other diagnostic aids, therapeutics and surgical techniques. Even during the professional lifetime of some of us, there have been such great changes as to seem as incredible to recent graduates as the fact that we had no automobiles, aeroplanes, radio, or movies in our early days.

Just over one hundred years ago, 1851, Hermann Ludwig von Helmholtz described his "eye mirror," the great grandsire of our ophthalmoscope. This relatively crude instrument of silvered mirrors, with which light was reflected into the eye from candle and gaslight, gave the inventor and fellow ophthalmologists an opportunity of seeing the eye grounds and studying the changes therein. After Edison, the light source became the electric bulb until every medical student is familiar now with the modern instrument with its self-containing light. It is probably true that the development of the ophthalmoscope was one of the greatest advances in ophthalmology.

During this period there have been a number of additions to the armamentarium of the ophthalmologist which have greatly aided in the study of eye diseases. Among these is the perimeter of Foerster in 1868 and the tangent screen, which Albrecht Von Graefe made on wood in 1855, followed by Bjerrum's cloth screen in 1889. As the ophthalmoscope had made possible the detailed study of the posterior portion of the eye, so the combination of corneal microscope introduced by Abbe in 1881 and the slit-lamp of Gullstrand, 1911, has given the opportunity for study of minute details of the cornea, anterior chamber, lens, and anterior vitreous. A further more recent development of the contact lens, as well as the Allen prism, has made visualization of the angle of the anterior chamber possible, very important in the problem of glaucoma.

While there had been much knowledge accumulated in respect to physiologic optics during the preceding centuries, it is probably safe to say that the period of accurate refractions of the eye had its real start with the advent of the ophthalmoscope. The first measurement of refractive errors with this instrument is credited to Edward Von Jaeger in 1855, followed by Bomans skiascope in 1859. Our retinoscope, one of the most important instruments in accurate refraction, stems from this "shadow test" study. The test charts for visual acuity in general use today are those of Snellen, introduced in 1862. The near vision test card is that of Jaeger from 1867. Donders published his epoch-making book, "The Refraction and Accommodation of the Eye" in 1864 and Helmholtz's "Textbook of Physiologic Optics" in 1856-1867. The trial-case of lenses was invented by Fromuller just before this era, 1843, but it was many years before ophthalmologists, as such, had trial cases, or for that matter, did many refractions. This was largely a matter left to opticians. In this country we owe much to Edward Jackson, for his interest and teachings in refraction as well as other phases of ophthalmology.

The problems of ocular motility as well as those of refraction were not well understood even in the days of Von Helmholtz and Von Graefe. Javal, in 1868, was responsible for the beginnings of our present concept of anomalies of ocular movements. Among others are Claude Worth and Maddox in England, Stevens, Savage, Duane, and Lancaster in this country, and more recently, Bielschowsky who came to America after working in Breslau for some years. The causes and correction of strabismus and motor anomalies are being given a large place at the present time in ophthalmological discussions.

It is during this period of time that a fuller knowledge of gross and microscopic anatomy of the eye has constantly been attained and with this naturally a better understanding of pathological processes. In connection with the latter, the name of Ernst Fuchs, of Vienna, at whose feet some of us have had the privilege of sitting, probably should head the list. In England there was Sir John Parsons and Treacher Collins. If we were to pick one man above all others in this country

it would have to be F. H. Verhoeff of Boston. There are a great many younger men, and for the sake of accuracy, women, who are furthering this valuable work. It should be recorded also that while, until recently, few ophthalmologists were conversant with the subject of histopathology, the graduate student in our field has been, in the recent past, gaining a very good working knowledge of it.

If an attempt were made to any more than catalogue the tremendous change in the etiological status of eye diseases, there obviously would not be space in a paper of this kind. What it meant may be quickly gathered by a very few dates—the discovery of the gonococcus of Neisser, 1879; staphylococcus, Ogston, 1881; tubercle bacillus, Koch, 1882; pneumococcus, Friedlander, and Klebs-Loffler bacillus, both in 1883; tetanus bacillus, Nicolaier, and the streptococcus, Rosenbach in 1884; and the spirochete of syphilis in 1905. If the increased knowledge in bacteriology and virology since that time were added, we would surely have a large volume.

Some of the above-mentioned organisms have been the cause of many of our severest eye lesions and the most destructive of sight. One of the leading causes of blindness in children was for many years, interstitial or parenchymatous keratitis. Jonathan Hutchinson, in 1858, showed that condition was one of the stigmata of congenital syphilis, along with notched teeth, and nerve deafness (Hutchinson's triad.) In recent years, where pre-natal treatment of syphilitic mothers has been in effect, especially in the first trimester, the incidence has dropped to almost nothing. In our state, it is very evident in the Faribault school, where it has dropped from a high to a low percentage of the blind or visually handicapped.

Another severe and blinding disease, responsible for many children in special schools, was ophthalmia neonatorum, gonorrheal ophthalmitis. In 1881, Crede introduced the method of prophylaxis known by his name, i.e., the instillation of silver nitrate in the eyes immediately after birth. The incidence dropped in all places where it was used from about 10 per cent to less than 0.5 per cent. Since the advent of penicillin there has been a sustained effort on the part of some to substitute this antibiotic for the 1 per cent silver nitrate solution now mandatory. There has been hesitation in adopting this change with the proven effectiveness of the silver solution. In the few instances in which infection develops, constant improvement in therapy has effectively saved eyes when treated.

Trachoma, which is considered among the viral diseases, is endemic in some countries, particularly Egypt and the near East. Its ravages have been known since earliest times, and have been of such great importance that international organizations have been at work during this century on the study of the disease and its amelioration. The first hopeful reports on treatment have come since the introduction of the sulfonamides.

It is sad to report that with the increasing knowledge of general medicine and with the constant addition of life-saving and life-prolonging measures, in some conditions there is an inverse ratio of visual health. One of the conditions is diabetes. In the younger diabetics, who have survived with the help of insulin, we are seeing more and severer retinopathies, going on in many cases to massive vitreous hemorrhage, retinitis proliferans, retinal detachment and blindness. With older people, too, the disturbances in the retina occurring with diabetes and in combination with hypertension is bringing about much visual loss. There has probably been also an increase in senile macular degeneration with the increase in longevity. Cataract of the senile type and glaucoma obviously would also show an increased incidence.

Another unfortunate condition causing blindness in children has appeared in about 12 per cent of the premature infants who are being saved. This condition, first described by Terry in 1932, and called by him retrolental fibroplasia occurs in greater numbers of prematures whose birth weight is under three pounds, decreasing proportionately as full term is reached, and is not seen in full-term babies. The pathology is now very well known, the end result being a complete detachment of the retina, which becomes incorporated in a fibrotic mass seen behind the crystalline lens. To date no influences in pre-natal or post-natal life can be said to be responsible for the development, the only definite factor being that of prematurity. This has meant that while there has been a decrease in special schools of children with poor vision or blindness from interstitial keratitis and ophthalmia neonatorum, their places are being taken by these unfortunates.

One of the more serious problems of ophthalmology is glaucoma, not a disease entity but a

symptom complex. The condition of hardness of the eyeball had long been known, but its nature was not established until after the development of the ophthalmoscope, followed by the perimeter and tangent screne. Measurement of the intraocular tension by means of the tonometer was made by various observers and instruments devised for this purpose. The ones in most common use today are products of the Twentieth century, those of the original Schiotz instrument or its modification by Gradle, and the McClean.

The important thing in glaucoma is its early recognition and relief of the increased intraocular tension. Pilocarpine and physotigmine or eserin were not isolated until the fourth quarter of the last century. It is only in the present century that medical treatment of glaucoma has had any degree of success. In recent years there have been a number of new products developed, which are useful in certain cases, but as yet pilocarpine is probably the one best drug available. The surgical treatment began with iridectomy, which was first done for this condition by Von Graefe in 1855. This method is still effective in a large percentage of cases of acute congestive glaucoma. In 1867, DeWecker proposed doing a sclerectomy, to produce a permanent fistula from the anterior chamber now commonly called the La Grange operation. This has been the underlying principle of all operations since, to produce such a filtering cicatrix. The two most widely used have been the corneo-scleral trephine of Elliot and the iridencleisis or iris inclusion operation of Holth, both developments of this century. As before mentioned, gonioscopy has made possible, in recent years, a view of the angle of the anterior chamber, a great aid in diagnosis, and in the selection of proper treatment. It has also brought about a revival of interest in congenital and juvenile glaucoma and their treatment by goniotomy.

Of the inflammatory diseases of the inner eye, iritis, irido-cyclitis, or generalized uveitis hold an important place. Space will not permit details of the changes that have taken place in our day in the ideas concerning the etiology and treatment of this oftentimes severe condition. In the textbooks of the early part of the century, syphilis was given as the chief cause of iritis. We now divide the disease into non-granulomatous and granulomatous iritis. The list of workers who have investigated the production of this disease experimentally is very large. We owe a large part of our knowledge to the development of the studies of immunity and allergy. Atropine had been used in treatment more than a hundred years ago, and is still an integral part of treatment. Fever therapy, with foreign protein injections, for a number of years, has been a valuable adjunct. Cortisone and ACTH have been of great value in controlling inflammations in certain types of iritis, but ophthalmology has experienced also some of the disappointments which other fields of medicine have had with these hormonal substances.

Ophthalmic surgery, as well as surgery in general, was given great impetus by two developments in the nineteenth century. Shortly before the period under consideration, general anesthesia had been introduced. Prior to this time eye surgery had been done without anesthetics or under some influence of opium or alcohol. It may be possible that the rather general popular idea of pain in cataract surgery has been carried down from that period. The other was the antisepsis of Lord Lister which led to our modern asepsis. A further aid to eye surgery was the introduction of the use of cocaine as a local anesthetic by Carl Koller, an American working in Vienna in 1884. For many years this was the only anesthetic that was used in cataract surgery, and those of us who were doing these operations twenty-five or thirty years ago used topical instillations of 4 per cent cocaine with satisfaction. Other local anesthetics have largely supplanted the use of cocaine. The advent of procaine was another milestone and is much used for infiltration anesthesia, particularly in retrobulbar injections in intraocular surgery. Adrenalin used in connection with anesthesia, was isolated by Takamine in 1900, just as we turned the corner into the present century.

The most commonly performed intraocular operation is that for senile cataract. Naturally this condition had always been observed and from very early times the pupil had been cleared of this "inspissated humor" by couching or pushing it back into the vitreous. This is mentioned because even after the first cataract extraction, generally credited to Daviel in France in 1747, one hundred years of controversy as to the operation of choice took place. It, therefore, brings the era of common acceptance of extraction of the lens to the last hundred years. The early incisions were made in the cornea and it was again

Albrecht Von Graefe who first introduced the linear incision at the limbus. His narrow-bladed knife, the Graefe knife, is still in use today. With many operations, the section is no longer made with the straight knife, the original incision being made with the keratome and enlarged with special scissors to the desired length. Two principle changes have been made in the cataract operation during the past quarter century. The first is the use of corneal or corneo-scleral sutures which are preplaced before opening the eye and tied on removal of the cataract. The second is the extraction of the lens in the capsule, which may be grasped by a toothless forcep or by means of a suction cup. Both of these procedures, in competent hands, have added much to the successful outcome of the operation.

One other surgical development must be added, that for retinal detachment. Various attempts had been made to reattach a separated retina with somewhat indifferent success and most cases of detachment were doomed to loss of sight in the affected eye. At the International Congress of Ophthalhology in Amsterdam in 1929, Gonin reported his operation of "ignipunctur" or electrocoagulation. Diathermy coagulation is now generally done, the principle being the production of multiple spots of irritation which in the process of healing re-cement the detached retina, and close the hole or tear usually present in the retina.

These examples will suffice to show the remarkable changes that have taken place. Mention should be made of the electromagnet for removal of intraocular foreign bodies of steel or iron. The camera for fundus photography has also been developed as an aid in following the progress of a case, and as an aid in teaching. The new developments in chemotherapy and antibiotics are too well known to require elaboration.

This account should not be closed until the great changes in the matter of education and training in ophthalmology have been recounted. It can readily be seen that almost all of the new instruments, the discoveries in basic sciences, the development of new techniques mentioned in this paper came from Europe. There have been many improvements by Americans in recent years. Living ophthalmologists in this country have scarcely been mentioned in this paper. History will take care of them. When the next hundred years is recorded, perhaps American names will lead all others.

Not so long ago men in this country, desiring to specialize in this field, worked with someone who was already in it, or made visits to the larger cities where clinics were established. Many spent time in London and Berlin, a few in Paris, but most went to Vienna. In the middle of the last century and indeed much later many men known as ophthalmologists also did general work. There was a long era, which continues somewhat even today, when a combination of eye, ear, nose, and throat practice prevailed. We are nearly at the end of that period, with training being given in ophthalmology or in otolaryngology. Actually there is more reason for ophthalmology and neurology to be combined than ophthalmology and otolaryngology.

The training of men in ophthalmology today is done mostly in three-year fellowships, as at Minnesota, or in one year spent in basic courses in instruction in certain medical schools, followed by two years of residency in approved hospitals. In addition to the work done by the American Medical Association, the Hospital Associations and the American College of Surgeons in the general improvement of medical schools and hospitals, the American Board of Ophthalmology has been a tremendous factor in the improvement of training in this specialty. This was the first of the specialty examining boards, organized jointly by the Section on Ophthalmology of the American Medical Association, the American Ophthalmological Society and the American Academy of Ophthalmology and Otolaryngology. Dr. Edward Jackson it was who fathered this idea and was the board's first chairman in 1916.

So, with improved tools, with ever-widening knowledge, with greatly improved training of young men, ophthalmology looks back on a hundred years of greater achievement than in all the centuries that had gone before, and forward to a bright future.

References

American Encyclopedia of Ophthalmology. Cleveland Press, 1918.

Masters, R. J.: The future of ophthalmology. Section on Ophthalmology, AMA, 11:27, 1951.

Verhoef, F. H.: American ophthalmology during the past century. Section on Ophthalmology, AMA, 35:50, 1947.

DERMATOLOGY IN THE FIRST CENTURY OF MEDICINE IN MINNESOTA

HENRY E. MICHELSON, M.D.
Minneapolis, Minnesota

FRANCIS W. LYNCH, M.D.
Saint Paul, Minnesota

LITTLE can be said of Minnesota dermatology before 1875. That there was little of dermatologic note in the United States is shown by Pusey in his general "History of Dermatology" where he lists only two major American items prior to 1850 and notes that the stirrings of "modern dematology" in Europe between 1850 and 1875 influenced only a handful of Americans as individuals. In Minnesota, except for clinical teaching at the several Medical Schools the story continued to be that of individuals until after 1915. The nature of early dermatologic practice in Minnesota seems not to have differed essentially from that elsewhere, though it is of some interest to note that there were some cases of leprosy among Scandinavian settlers, in number sufficient to attract the attention of the noted Norwegian dermatologist, Carl William Boeck, on a visit in 1869-70 to Minnesota and several adjoining states. Probably due to climatic and hygienic conditions the disease subsequently disappeared from the state.

Several early dermatologists deserve individual consideration. Two Saint Paul physicians were among the earliest members of the American Dermatological Association, yet they can hardly be regarded as dermatologists or even as contributors to Minnesota dermatology; in fact, it is not clear why either of them desired membership in that organization. The death of one, Harry C. Hand (1848-1876), was recorded in the first transactions of the Association. The other, Daniel W. Hand (1834-1889), was an outstanding, able, and highly regarded physician of wide interests and activities but it is not known that he contributed directly to dermatology here or elsewhere, though he was the first president of Ramsey County Medical Society and also the first president of the State Board of Health.

Minnesota dermatology was early favored by the attention of a little-remembered, but active and peripatetic figure, LeGrand N. Denslow (1852-19??). He had already practiced his specialty from 1880 in New York City as a member of the New York Dermatological Society and was a recently elected member of the American Dermatological Association before his short period of practice in Minneapolis. He moved to Saint Paul in 1885 where he was Professor of Genitourinary Surgery and Venereal Diseases at the Saint Paul Medical College from 1885 until 1888 when the College was absorbed by the Medical School of the University. Denslow left Saint Paul about 1890 and subsequently practiced dermatology in Los Angeles (about 1893) and then returned to New York City until at least 1908. Then, or during his previous sojourn, he was active in the Outpatient Department of Bellevue Hospital. Working in 1909 at Charcot's Clinic at the Salpetriere Hospital in Paris, he became interested in a therapeutic technique which he later publicized in a monograph, "A Surgical Treatment of Locomotor Ataxia," (Balliere, Tindall & Cox, London, 1912). Though Denslow visited in New York in 1910 and 1911 he seems to have practiced in London from 1910, with a Harley Street address for a time. If Denslow left few lasting marks in Minnesota, his subsequent course seems of sufficient interest to deserve listing him in this review.

Throughout this early period the dermatologists divided their interests, with considerable attention devoted to genitourinary diseases. Unlike most, Burnside Foster (1861-1919) seems to have been much more interested in dermatology though, of course, treating venereal diseases, a custom which continued for some time. Coming from the East, he established his practice in Minneapolis in 1887 but changed to Saint Paul in 1891, apparently to take over the practice vacated by Denslow's departure. While many modern physicians have dozed in their offices and many others in earlier days slept there at night, Foster may have been unusual in utilizing in Minneapolis a desk which was converted to a bed at night. He was a learned individual, interested in writing and in teaching, acquiring professorial rank in dermatology at the University Medical School (1899) where he lectured for many years on Medical History as well.

Dr. Michelson is Professor and Director of the Division of Dermatology and Dr. Lynch is Clinical Professor in Dermatology at the University of Minnesota.

He was a member of the American Dermatological Association, attended national and international dermatological meetings, wrote numerous papers for local and national journals, and was active editorially in Minnesota. He was the first president of the Minnesota Dermatological Society. Foster and Vander Horck may be regarded as the first who strongly influenced the course of dermatology in Minnesota though the early years of the twentieth century brought many more who expanded and developed dermatologic practice in this region.

The history of a specialty in medicine in a locality is largely a report of the progress of that specialty in the medical school or schools of the area. In Minnesota the state university now has the only medical school. The history of dermatology at the University may be divided into three periods. The first began about 1900 and continued until 1911. At that time Dr. Max Vander Horck was professor of dermatology and genitourinary diseases. He was trained in Vienna and because of a fascinating personality attracted attention to the teaching and practice of dermatology. At that time dermatology was taught by demonstrating patients with dermatologic conditions and by lecturing upon the disease the patient presented. There was no plan of progressive lectures. There was no hospital service, therefore no interns or residents who could be called upon to investigate the patient. Diagnoses were made at sight. Dermatopathology was not available. What assistance Dr. Vander Horck had came from volunteers, such as Franklin R. Wright, John Butler, and S. E. Sweitzer. They were all influenced by Vander Horck and went to Vienna and other European centers to further their knowledge. On their return they practiced dermatology and treated venereal diseases. They also attended the University dispensary where small groups of students were introduced to the morphologic diagnosis of skin diseases.

After Dr. Vander Horck's death, Dr. S. E. Sweitzer was appointed to be in charge of dermatology. He held the rank of associate professor. In addition to the dispensary clinics, Dr. Sweitzer organized an undergraduate teaching schedule. He had the assistance of Drs. John Butler, Harry Irvine, George Olson, and Clifford Boreen, all of whom were practitioners. There were no postgraduate students. When the University Hospital was opened Dr. Sweitzer became the first dermatologic consultant. Dr. Sweitzer was in charge of dermatology for approximately another, or the second, decade of the specialty at the University. About 1920 Dr. Sweitzer was given the opportunity to establish dermatology at the Minneapolis General Hospital, where he developed a large out-patient department and was assigned a certain number of beds in the hospital. The teaching at the University was entrusted to a committee consisting of Drs. Butler and Irvine; this policy continued until the present incumbent, Dr. Henry E. Michelson, was put in charge and in 1925 he was made professor of dermatology. He was a product of training under Dr. Sweitzer and a European sojourn. Dr. Irvine had previously exhibited great interest in the public health aspects of venereal diseases and subsequently spent many years of part-time work in this field at the Minnesota Department of Health.

The history of the specialty at Minnesota is essentially the same as the history of dermatology in America, beginning with the end of World War I to the present time. It may be briefly outlined as follows: Previously there was practically no place in America where a graduate student could receive adequate training in dermatology. Vienna, Paris, Berlin and London offered such instruction. Vienna had the best organized teaching and therefore attracted physicians who wished to take postgraduate training. Dermatology was well established throughout Germany, Austria, and Switzerland by 1910. The founders of dermatology in the various centers had created their particular schools. Successors had ascended to the professorships and the staffs included many assistants and residents. Some of these posts were open to Americans who, if appointed, became indoctrinated and inspired to go beyond the routine lectures. These few visualized transplanting such ideas to America, but on returning they found the medical faculties quite loath to further their lofty plans. The facilities were and still are lacking, and the enthusiastic embryo dermatologist had to indeed have zeal to continue to adhere to his intentions and fight the opposition. This was about the condition of dermatology at the end of World War I. There were many European trained men in the larger cities; most of them had some university connections; most of them had secret plans to build departments if the opportunity presented itself. They depended for their clinical help upon the young men returning from European clinics,

but the war had disrupted European teaching. Glorious Vienna was no more the capital of a large empire with royal support. Young men had to turn to their own schools for graduate training. Dermatology, like the other specialties, had been organized for undergraduate teaching. Now it found men pounding at its door for training. The University of Minnesota was in the same position as other similar institutions. It was emerging from the predominantly undergraduate phase to one of combined or continued undergraduate and graduate instruction. Dermatology took its place with the others. Services were established at the University, the Minneapolis General and the Ancker Hospital. Lectures, demonstrations, courses in other departments, were utilized. A framework of graduate instruction was built. The work at the University was parallel to the work at the Mayo foundation. Graduate degrees were granted on fulfillment of the requisites.

When the Board of Dermatology and Syphilology was established, Minnesota was chosen to be one of the accredited schools, having met the requirements.

The history of dermatology in Minnesota has been one of steady, gradual growth. Dr. Michelson has been in charge since 1925. The staff at present has one professor, two clinical professors, two associate clinical professors, two assistant clinical professors and a number of instructors, assistants and residents. Dermatology at the Minneapolis General, Ancker and Veterans' Hospitals are intimately associated with the University in the graduate program.

The dermatologic staff have received recognition. There has been one president of the American Dermatological Association and of the Investigative Society for Dermatology, two chairmen of the Section of Dermatology of the American Medical Association, two members and one president of the American Board of Dermatology, and three presidents of the Chicago Dermatological Society. There have been two corresponding members of the Austrian Dermatologic Society and one honorary member and one corresponding member of the British, Danish, Swedish, Italian, and French Societies. There have been innumerable contributions to dermatologic literature and to society programs. The future of dermatology at the University of Minnesota will undoubtedly keep pace with the general progress of the school.

In much lesser degree has Minnesota dermatology been influenced by two organizations other than the Medical School. Founded in October, 1915, the Minnesota Dermatological Society continues actively with a program of clinical presentations, open discussion and an informal dinner. There were at its initial meeting five from Saint Paul: Armstrong, Cook, Foster, Freeman and Klein; five from Minneapolis: Butler, Olson, Sweitzer, Thomas and Wright; and Linneman from Duluth. The first elected officers were Foster, president, Sweitzer, vice president, and George Olson, secretary. The meetings have alternated between Minneapolis and Saint Paul, with less frequent meetings in Rochester and Duluth. It is among the oldest of America's local dermatological societies. Transactions were published only by several groups in New York City, one in Philadelphia and one in Chicago when the Minnesota Society began such publication in 1916, since when the transactions of the Society have been published regularly in the *Journal of Cutaneous Diseases* and its successor, the *Archives of Dermatology and Syphilology*. Today the organization is of regional stature with active members in Wisconsin, Iowa, Nebraska, the Dakotas and Manitoba.

Most of the early members of the Minnesota Dermatological Society continued practice in the area. The Minneapolis men have already been mentioned. In Saint Paul, John Armstrong was a man with a wide range of interests, including editorial activity, library work, Minnesota history and archery. Teaching activities of Henry ("Nick") Klein and Charles D. Freeman, Sr., were largely confined to work in public clinics in Saint Paul. Freeman was a regular attendant at meetings of the American Dermatological Association, invariably acompanied by Jack Butler, a close friend of many years. Edward T. Gager subsequently joined the Society and practiced in Saint Paul for many years.

In dermatology as in other fields of practice, the Mayo Clinic has exerted a favorable influence in Minnesota. There was no separate dermatologic service at the Clinic prior to 1916 when John H. Stokes arrived to head such a Section. Though he did not directly exert much influence on Minnesota dermatology during his relatively brief stay, he did bring to the Clinic a young associate, Paul A. O'Leary, who succeeded him as Head of the Section and has since been an inte-

(Continued on Page 388)

A HUNDRED YEARS OF PROGRESS IN THE THERAPY OF URINARY INFECTION

WILLIAM F. BRAASCH, M.D.

Rochester, Minnesota

UP TO 100 years ago the therapy of disease in the genitourinary tract consisted largely of treatment for stone in the bladder, stricture of the urethra and venereal disease. In common with other branches of medicine, urology was on the threshold of a new era. The leaven of scientific investigation, which had been slowly maturing, burst forth with one discovery after another which revolutionized the practice of medicine in all its phases.

When the methods of treatment in use a century ago for infection in the urogenital tract are compared with modern methods of treatment, the vast progress that has been made since that time can be realized. Knowledge of such infection 100 years ago was extremely meager. Uroscopy, employed as a method of examination of the urine since the medieval era, was still being used. The modern instruments of diagnosis and the exact methods of study of the urine employed today were then very remote. Use of the microscope in examination of the urine was unknown. Localization of the source of pyuria was largely guesswork. The practitioner of that day might allow the urine to sediment, and thus gain some impression, from its appearance, as to the presence of pyuria. If dysuria was present, the physician of that time probably would have prescribed one of the drugs commonly used for that purpose, such as sodium bicarbonate to alkalinize the urine, spirits of niter or sandalwood oil. If pain was present, he probably would add laudanum or paregoric.

The best-known type of urinary infection at that time was that which occurred secondary to stone in the bladder. By inserting probes through the urethra into the bladder, the physician could ascertain the presence or absence of stones. If stones were present, removal was attempted either by means of crushing with the crude instruments extant or perineal lithotomy.

Theory of Bacterial Infection

Modern concepts of infection began with the discovery of Pasteur that infection is caused by bacterial invasion of the tissues. This discovery also opened the way for the modern therapy of infection. Realization of the value of Pasteur's theories and their application to the therapy of urinary infection by the medical profession was unbelievably slow. For instance, the febrile reaction which often occurred after the passage of unsterile instruments in the urethra was believed to be caused by absorption of decomposing urine, and was referred to by clinicians of that time by the facile French term, *absorption urinaire*. Strangely enough, Pasteur's discovery of bacterial action was not generally accepted by many of his contemporaries. The discovery of the tubercle bacillus by Robert Koch, and its demonstration as the cause of tuberculosis came later. Various followers of both Pasteur and Koch subsequently identified the causative bacteria involved in different types of infection.

The vast work of identifying and classifying the many hundreds of bacteria which cause disease proceeded gradually, but recognition of the bacteria involved in urinary infecton was extremely slow in developing. In fact, it was not until recent years that the distinction of bacteria and adequate methods of treatment were evolved. Nonetheless, even in early years it became evident that elimination of urinary infection depended on a working knowledge of the bacteria involved. Today the urologist readily gives the names of a multitude of bacteria and is familiar with many of their cultural characteristics and microscopic appearance.

The next step to intelligent treatment of urinary infection was the necessity not only for a working knowledge of the bacteria involved, but also for recognition of their individual reactions to the various bactericidal drugs. Even today, it will not avail to dust off and read old textbooks on bacteriology to obtain such information, because knowledge of the subject is constantly being revised. What is required is to consult current literature to bring oneself up to date.

Urologists found that microscopic examinations of dried urinary sediment stained with Gram's stain permitted a practical and fairly accurate method of identification of bacteria. They also

Dr. Braasch is an Emeritus Member of the Section of Urology, Mayo Clinic, Rochester, Minnesota.

called attention to the frequent occurrence of two or more different types of bacteria in an instance of urinary infection. This, in turn, called attention to the need of identifying the several organisms present before selection of therapy.

Rise of Rational Drug Therapy

The therapy of urinary infection a century ago was limited and empirical, and it remained so for many years. Pasteur's work, once it came to be accepted, provided the opportunity for scientific investigation of antibacterial drugs. Although progress was extremely slow until recent years, numerous attempts were made with various means to combat the infecting bacteria. Following the example of Koch and his co-workers in the field of tuberculosis, attempts were made to eliminate urinary infection with vaccines, both autogenous and otherwise. Although good results occasionally were reported, such attempts were largely unsuccessful.

Bacteriophage, which had been found to be of some value in combating cholera, also was tried in eliminating urinary infection caused by B. coli. Although some favorable results were reported, the method gradually fell into disuse. A number of chemical preparations administered orally were employed with variable results. Prominent among these should be mentioned hexamethylenamine. This drug was widely used as a urinary antiseptic agent under the trade name of urotropin. Hinman showed that this drug was of little therapeutic value unless the pH of the urine was less than 5. When used with drugs that acidify the urine, hexamethylenamine still is employed in controlling infection with B. coli, since it causes little or no systemic reactions. Several preparations of azo dyes were employed in an effort to combat acute renal infection. Hugh Young advocated the intravenous injection of mercurochrome. In several cases the fever subsided within twenty-four hours after mercurochrome had been injected, and the infection was miraculously controlled. However, in many other cases little or no benefit resulted, and several deaths were reported as following intravenous injection. Other dyes were used for chemotherapy, including acriflavine and gentian violet, with similar results. The intravenous injection of neoarsphenamine in minimal doses eliminated urinary infection with staphylococci in some cases. A great variety of drugs was used for local application to infected areas of the urinary tract by means of lavage and instillation. Among them, solutions of silver nitrate, potassium permanganate, silver protein preparations and mercurochrome were most frequently employed for urethral instillation and lavage of the bladder and the renal pelvis.

One of the notable attempts to control bacillary infection was made by Nielson, a Swedish scientist, who found that acidification of the urine to a pH of less than 5 would eliminate colon bacilli. However, it proved to be difficult to maintain a lethal acidity of the urine by oral medication. About this time Helmholz noticed that a glass of urine which had been standing in the laboratory for five days remained clear. He found that it belonged to a patient being treated for epilepsy by means of a ketogenic diet. It was evident that the urine produced after a ketogenic diet contained elements which were bactericidal. Clark thought that the sterilizing element in such urine was largely that of acidification, and found that the diet eliminated bacilluria in a series of patients who had urinary infection. Later, Fuller showed that the important bactericidal element in ketonuria was an end product of fat metabolism, namely, beta-hydroxybutyric. However, many patients found the ketogenic diet very objectionable, particularly when continued over a period of several weeks. Fortunately, about this time, Rosenthal discovered that mandelic acid, when excreted in the urine, would eliminate bacilluria. The ketogenic diet was rapidly displaced by the use of mandelic acid, which was widely employed in a synthetic form. After a few years, however, this drug in turn was supplanted by the sulfonamide and antibiotic drugs.

The therapy of urinary infection as employed today had its inception in the brilliant research of Domagk, eighteen years ago. He was first to discover a drug which when absorbed caused a bactericidal reaction in the tissue cells. His first sulfonamide drug, called prontosil, initiated the development of a series of drugs which revolutionized the therapy of infections. The group of sulfonamide drugs multiplied rapidly, so that today there is a wide choice of those which have specific action in urinary infection. These drugs in turn, in recent years, have been succeeded by the development of antibiotic drugs, so widely employed today.

It has been said that there is a drug for every

bug. While this is not strictly true, there are specific antibiotic agents and sulfonamide drugs for the various bacteria involved in urinary infection. Intelligent use of these agents requires a careful study and a thorough knowledge of bacteriology as well as of the varying reactions on the part of bacteria to the different drugs employed. It must be remembered, moreover, that all of these agents are most efficacious when the infection is largely superficial, when there is no extensive cicatricial change in the renal tissues and when there is no obstruction to drainage of urine.

Fancy might lead one to visualize the treatment of infection in the future. It might be wondered whether the therapy employed 100 years from now will cause the status of therapy of today to appear as primitive as that employed a century ago.

Renal Tuberculosis

The modern conception of renal tuberculosis, as well as treatment of the disease, had its origin with the discovery of the tubercle bacillus by Robert Koch. The attempts made by him and his followers to overcome pulmonary tuberculosis by means of vaccine also were applied to renal tuberculosis. Similarly, there was no success. It took many years after the first successful nephrectomy by Simon in 1869, before attempts were made to remove the kidney because of tuberculosis. In the meantime, it had been discovered that the diagnosis of renal tuberculosis could be made by detection of the tubercle bacillus in the sedimented urine and, later, by cystoscopy. The mortality rate associated with nephrectomy was gradually reduced from 50 to 2 per cent. The methods of treating the infected ureter varied from ureterectomy, partial or complete, to injecting it with phenol. It also came to be realized that the auxiliary treatment of rest and adequate nutrition were of value in the attack on renal tuberculosis. No method of chemotherapy which was tried proved to be of any value until recent years, when it was found that streptomycin deters the growth of Mycobacterium tuberculosis. This particular development has presented some basis for hope in the chemotherapeutic elimination of tuberculosis in all its forms.

Gonorrhea

Gonorrhea was known to the ancients. It has plagued humanity over the centuries. For ages the bacterial nature of this disease was unknown, and as a consequence of absence of such knowledge, treatment defied the theories of all physicians and savants. It may be said that the modern conception of gonorrhea began in 1879, when Neisser demonstrated that the coccus which bears his name is the cause of gonorrhea. Even with this knowledge at hand, treatment of the disease remained unsatisfactory, and was the subject of wide controversy for several years. Although lavage of the urethra with potassium permanganate, silver protein preparations and solutions of silver nitrate often relieved the symptoms, it did not eliminate the infection. A curious therapeutic development arose when Carpenter and his colleagues discovered that the gonococcus succumbs when subjected to a temperature of 106° F. Cabinets were constructed in which patients could be subjected to a temperature of 106° to 107° F. for several hours. Desjardins and his colleagues reported on a series of patients treated in fever cabinets, from whom the gonococcus was completely eliminated. This meant that, although the treatment was heroic, it was the first that could completely eliminate gonococcic infection which had defied all previous efforts for centuries. Shortly after the introduction of fever therapy, it was shown that the sulfonamides could accomplish the same thing. These drugs in turn were soon succeeded by antibiotic agents, which are being employed so widely today.

Within a few years a simple and successful treatment of gonorrhea has been found. The entire clinical picture of this disease has been revolutionized. Many complications of chronic urethritis which plagued the urologist over the years have vanished like magic, and bid fair to be relegated to the past. As successful elimination of the gonococcus has been attained, many of the social complications, as well as most of our previous concepts, of the disease have gone. With the recent development of so-called one-shot methods of the administration of antibiotic agents, the incidence of stricture of the urethra, which plagued men over the centuries and once seemed to support the urologist in his practice, now promises to become scarce, if indeed not eliminated. In fact, it looks as if the future urologist will face a strictureless world.

(Continued on Page 386)

MINNESOTA OBSTETRICS
1853-1953

WILLIAM P. SADLER, M.D.
Minneapolis, Minnesota

THIS YEAR marks the hundreth anniversary of the Minnesota State Medical Association and it has become the writer's privilege to give a historic sketch of obstetric progress in our state during the past century.

The Minnesota Territorial Medical Society held its first meeting on July 23, 1853. Like some newborns, the society had a faltering start. Few meetings were held. Reorganization was attempted in 1856. It was not until 1869, following the turbulent civil war period, that the State Medical Society as we know it today, was reorganized.

Our Minnesota State University opened in 1851. Professor E. W. Merrill was its head. Twenty students were enrolled. The University was discontinued in 1855. It reopened in 1867. William Watts Folwell was its first president. The University's early years were fraught with many difficulties. After the civil war, its one building was found occupied by a squatter. Turkeys and cordwood were housed in different rooms. Its basement was badly damaged by wood chopping.

It is a far cry from the University's turkey roosting days and enrollment of seventy-two students in 1867 to the vast acreage, enormous physical plant, and teeming thousands of enrollees today.

The story of medical and obstetrical progress over the century is largely the influence of the University on medical education. Our great University has been the lode star in our attainments. Its greatest gifts have been not what the students were offered in fine buildings and equipment, nor in didactically imparted knowledge of facts. The influence it exerted in the development of character and native ability in its students has been worth more than all else put together. Dr. Jennings C. Litzenberg's greatest of many accomplishments in Obstetrics and Gynecology, as head of the department (1913-1938), was his influence on the development of these traits in his students.

Obstetrics is that branch of medicine which deals with parturition and its sequels. Its chief aim is that every pregnancy ends with a healthy mother and child. Obstetric care strives to reduce discomfort and to leave mother and child physically and mentally sound.

The earliest obstetricians were women and priests. For thirteen centuries the physicians of Europe were not allowed to attend normal cases of delivery. In the seventeenth century they began to participate to some extent. Obstetrics was not a man's profession in America until the middle of the nineteenth century. Our story of Minnesota Obstetric progress begins at this time.

In the last century Minnesota's physicians printed cards in the newspapers indicating their availability for "complicated obstetric cases." Many of the midwives in our pioneer days had been trained in good schools of midwifery in Holland, Germany and the Scandinavian countries.

Preventitive obstetric medicine is considered an American contribution to the widespread introduction of prenatal care. Much credit is given John William Ballantyne, a University of Edinburgh graduate in 1883 for his advocacy of antenatal care. In our country it was conceived in 1901 by the Boston nursing profession and received great impetus in 1912 by Robert deNormandie.

Dr. Mary Jackson Whitney practiced in Rochester, Minnesota, during the years 1879 and 1880, three years before Ballantyne's graduation. Her card published in a Rochester paper of the day read:

> "Ladies if you intend to secure services of Dr. Whitney during your confinement, engage her at your earliest convenience. Twenty years' experience as midwife causes her to prefer visiting her patients before the event as well as after, in order to render the occasion comfortable and safe. Her subsequent visits are to insure as far as possible perfect health combined with an elegant figure. No extra charge for advice."

Dr. Whitney's advocacy of prenatal care in Minnesota antedated by many years, the famed Ballentyne's teachings, deNormandie and the Instructive Nursing Association of Boston.

Obstetrics reached its full dignity as a special-

Dr. Sadler is Chief, Department of Obstetrics and Gynecology, Minneapolis General Hospital.

ty in the early twentieth century. Midwives did not give up their place in the field without a struggle.

In the sixteenth century, Dr. Wertt of Hamburg realized the study of the birth process should be at an actual labor. He disguised himself as a woman in order to be admitted to the lying-in-room and attended confinements in his district. Upon discovery of his masquerade, his punishment was swift. He was burned at the stake in 1522 as a lesson to watching physicians that midwifery was a woman's art. In our early colonial days, articles denouncing the fashion of having men midwives appeared in newspapers of the time.

Minnesota's obstetric progress during the century is highlighted by its contribution to medical education, lowering of maternal mortality, early entry into preventitive obstetric medicine by widespread prenatal care and by contributions to reduction of stillbirths and neonatal deaths.

Medical Education

As a result of the Flexner report in 1910, Dr. Vincent, president of the University, reorganized the faculty of the Medical School in 1913. Dr. J. C. Litzenberg was given the chair of Obstetrics and Gynecology. He retired in 1938, becoming emeritus professor. Credit is due his predecessors, Doctors Parks Ritchie and Ames. The Litzenberg story has been told many times. The contributions of this lovable, remarkable man to Minnesota's obstetrical education are monumental. In any field of endeavor, competent, trained personnel is a prime requisite. This he realized. He gave his teaching life to the problem of turning out excellently trained men. No man was prouder than he of the accomplishments of "his boys."

He was influential in establishing the requirement of serving an internship before qualification for the degree of M.D. He played a large part in the development at the University of the system of teaching fellowships for graduate students, leading to an advanced degree of Ph.D. This was a unique innovation in medical graduate study, as was the establishment of the Center for Continuation Study. At the latter, refresher courses are offered several times yearly for obstetricians and general practitioners.

Dr. Litzenberg was a founder and influential in organization of the American Board of Obstetrics and Gynecology in 1930. The high standards for becoming a diplomate of this Board has produced better qualified specialists. Diplomates by precept and example exert a strong influence on the instruction of thousands of medical students, interns, and residents.

Dr. Litzenberg's influence in teaching sound obstetrics grew beyond the boundaries of our state. He became a national figure in his field. He was succeeded in 1938 by Dr. John L. McKelvey, who with his staff, has made a long list of scientific contributions to obstetrics. Both of these great teachers have trained men who now head departments in other medical schools. Outstanding among these men are Drs. LeRoy A. Calkins, University of Kansas; Charles McLennan, Stanford University; Emil G. Holmstrom, University of Utah; and Curtis J. Lund, University of Louisiana.

The affiliation of the Mayo Foundation for Postgraduate Study with the University of Minnesota has resulted in numerous contributions to obstetrical progress, under the former department head, Dr. Robert Mussey, and the present head, Dr. L. M. Randall.

Maternal Mortality

In 1913 the Maternal Mortality rate in Minnesota was approximately seven per 1,000 live births, one of the lowest in the country. In 1938, the year Dr. Litzenberg retired, the rate was the lowest of any state in the union. Maternal deaths have continued to decline in Minnesota. In 1947, the death rate was 0.6 per 1,000 live births, an almost irreducible minimum.

The decline in maternal mortality in the United States has been general since 1930. Many factors have entered into this. An idea developed in Philadelphia by Phillip F. Williams in the early 1930's, adopted in Minnesota and elsewhere, has contributed much to this decline. This was the organization of Maternal Mortality Committees. The Minnesota Obstetrical and Gynecological Society sponsored the idea and our Maternal Mortality Committee is conducted under the auspices of the Minnesota State Medical Association and the University of Minnesota. Maternal deaths are analyzed as to their preventability. This alerts specialists and general practitioners alike as to whether faulty obstetrics has been involved.

Preventitive Obstetric Medicine

Today, as always, the three great killers and cripplers in obstetrics are: hemorrhage, puerperal infection, and the toxemias. These complications account for 90 per cent of all maternal deaths. Availability of blood from blood banks, chemotherapeutic and antibiotic agents and prenatal care have reduced markedly the deaths from this triad of killers.

Dr. Fred L. Adair, a graduate of Minnesota and associate professor on Dr. Litzenberg's staff, later became professor and head of the Department of Obstetrics and Gynecology at the University of Chicago. He headed the American Committee on Maternal Welfare from its inception. This committee has held four large congresses attended by some 5,000 physicians, nurses, public health workers, and others interested in the field. Among Dr. Adair's many contributions to obstetric progress while at the University of Minnesota was the impetus he gave to the development of prenatal clinics and proper prenatal care.

Many other agencies took part in placing Minnesota early in this field. The activities of the State Health Department, City Health Departments, Visiting Nurses Associations, Infant Welfare Societies, and Public Health Nurses played a large role in bettering maternal and infant welfare.

Reduction of Stillbirths and Neonatal Deaths

One function of the obstetrician is to insure a healthy child. There is a twilight zone between the birth of the child where his responsibility ends and the pediatrician's begins. Stillbirths and neonatal mortality rates from all causes, as well as from premature births (greatest neonatal death factor), have been declining in Minnesota and elsewhere the past fifteen years. Recently the curve has leveled off. Further reduction must be made in this area.

In 1951, a Neonatal Mortality Committee was established. A pilot study is now being made in Hennepin County under auspices of the County Medical Society. Plans for extending such studies to Ramsey, St. Louis and other counties are envisaged. Such plans are waiting results from the pilot study in our largest metropolitan center.

That there is urgent need for progress is evidenced by the fact that there are 150,000 infant deaths yearly in the United States associated with childbirth. As many as 1,874 infants died in 1950 in Minnesota. Three-fourths of these deaths occurred within the first thirty days of life. In the present state of our knowledge, many of these deaths are considered non-preventable. Much can, must and will be done to salvage this infant wastage. This also applies to the wasteage each year in the nation of an estimated 300,000 spontaneous abortions.

Conclusion

It may he said, it seems, without appearing chauvinistic, that Minnesota can take justifiable pride in its century of obstetric progress. Many challenges lie ahead. From our past history, we may be convinced that future progress in the field will find Minnesota playing its proper rôle.

MEDICAL JOURNALISM IN MINNESOTA

(Continued from Page 348)

others concerned in organizational affairs. For the past five years I have been a member of the Advisory Committee of the State Journal Advertising Bureau (formerly the Co-operative Medical Advertising Bureau) which has been providing an increasing amount of advertisements for the member journals of the Bureau. Last year the Bureau remitted to the member journals advertisements netting over $600,000.

I wish to take this occasion to express my appreciation of the support of the associate editors and the Editing and Publishing Committees during these many years. While editing a journal requires hard work at times, it possesses a certain fascination and a reward in itself for having stimulated one's best efforts.

NEUROLOGIC AND PSYCHIATRIC TRENDS IN MINNESOTA

A. B. BAKER, M.D., B. C. SCHIELE, M.D., D. W. HASTINGS, M.D. and R. A. JENSEN, M.D.
Minneapolis, Minnesota

THE NATURE of mental illness is such that individual families are seldom able to provide private care for mentally ill relatives. Hence, the establishment of public facilities has been and is regarded as a proper responsibility of the state. By 1862, Minnesota began to assume responsibility for the care of its own mentally ill. At first, these patients were boarded in the hospitals of neighboring states, but by 1866 the state had been able to establish temporary facilities at St. Peter, Minnesota. The first permanent building was partly completed and began to be used in 1870. Five years later, 530 patients were being cared for. Many of these had to be housed in temporary buildings as the legislative grant had not permitted the building of a sufficiently large, permanent structure. Even then, a number of unimproved patients had to be sent back to home communities in order to make room for new cases. The demand upon the existing facilities was so great that, for a time at least, each county was required to take back one partially recovered or chronic case for each new patient admitted.

These early struggles to provide adequate facilities for the ever-growing population of the mentally ill in Minnesota in large measure composed the early history of psychiatry in the state. For many years, the only physicians practicing psychiatry in Minnesota were those men who were on the staffs of the mental hospitals. Gradually, new hospitals were built and institutions were established for the care of the various types of incapacitated persons: the inebriate, the epileptic, the mentally deficient, the psychotic, and the criminally insane. Today, Minnesota has nine separate institutions with a total bed capacity of 9,546.

Throughout the years, the provision of adequate care for these sick people has constituted a serious problem and a significant drain upon the financial resources of the state. Although there have been many significant advances, the present-day problems of overcrowding, inability to obtain adequate staff, long waiting lists, and similar problems have been with us since 1866. Historically, the recent emphasis upon the mental health program of Minnesota in many ways is an interesting repetition of occurrences of the past. Then, as now, the struggle between practical economy and the desire for better facilities has led to action on the part of citizens' groups. Several "commissions of eminent medical men" have served in advisory capacities to the governors of the state. Throughout the years, the legislature has been besieged with pleas for furnishing the financial means for better care of the mentally ill. As early as 1880, petitions were made for increasing the ratio of attendants to patients, for the better selection and training of attendants, and for the abolition of restraints.

The course of neuropsychiatry in Minnesota has been molded in large part by a number of eminent medical men. In the late 1800's their industry and scholarly contributions did much to raise the level of medical practice, particularly in this specialty. The names of Drs. A. A. Sweeney, C. E. Riggs, W. A. Jones, and A. Hamilton are among those who were nationally prominent, who were studious investigators, skillful writers and teachers. These men had broad medical and civic interests.

Prior to the establishment of formal training programs in neurology and psychiatry that we have today, private practitioners generally went into the neuropsychiatric field after a period of work in a mental hospital or after being associated with a man specializing in the field. The emphasis tended to be largely on neurology and the care of the frankly psychotic. This was true on a national as well as on a local level.

In recent years, men with more formal training, particularly in the separate fields of psychiatry and neurology, began private practice in Minnesota. Since World War II, there has not only been a large increase in the number of neurologists and psychiatrists in the state, there have also appeared those who have limited themselves to the private practice of office psychotherapy and several have limited themselves to psychoanalysis. As a national phenomenon occurring during and immediately after World War II (and in some centers a number of years earlier), came a separation of the former specialty of "neuropsychia-

try" into its two components of neurology and psychiatry. The fields of knowledge in each specialty have become so great that it was evident that each deserved the rating of a separate specialty. This was reflected in numerous ways: at the national level, by the reorganization of the examining body into that of the American Board of Psychiatry and Neurology with separate periods of residency training required for qualification in each specialty; at the state level, by the reorganization of the University of Minnesota Medical School Department of Neuropsychiatry into the two divisions of psychiatry and neurology with separate clinical services and teaching schedules. The two divisions, however, are in the same department and enjoy a mutually beneficial relationship. A similar division of professional labor took place in the structure of the Mayo Clinic. It is evident that there are large areas of overlap between the two specialties (for example, in the organic psychoses, in basic research problems, and so forth); but in general the two fields, in more recent years, have come to involve different types of training and different clinical techniques.

Since its early years, the Medical School has always had a division or department of nervous and mental diseases. At first its staff was made up entirely of part-time physicians. The first full-time staff appointment began with Dr. J. C. McKinley in 1921. During most of its existence, neuropsychiatry at the University had been heavily oriented toward organic neurology. The psychiatry that was taught was largely limited to the gross psychoses and was largely descriptive in character. This was in keeping with the national trends of the time.

For some years there had been recognized the need for the establishment of a Minnesota psychopathic hospital to function as a teaching and research center. After much controversy and many delays, a 37-bed psychiatric unit was opened at the University in 1937. Along with the increase in the size of the neurologic service and the establishment of an excellent neuropathologic laboratory, the University became much better equipped to teach a well rounded program in both neurology and psychiatry. It was not, however, until after World War II that the staff expanded sufficiently to allow an adequate teaching of modern psychodynamic psychiatry. Perhaps the most important change was the introduction of a comprehensive orientation of medical psychology throughout the four years of medical school.

Interest in developing a child guidance service in the Twin Cities resulted in the establishment of a Demonstration Clinic in November, 1923, which was located at the University of Minnesota. This one-year demonstration led to the establishment of three services: (1) a Child Guidance Clinic in Minneapolis under the Board of Education, (2) one in Saint Paul under the sponsorship of the Amherst H. Wilder Charities, and (3) one at the University of Minnesota to serve the state. The last service was discontinued in June, 1925 due to the lack of legislative support. However, this two-year program influenced the development of the Duluth Mental Hygiene Clinic and later paved the way for the development of comprehensive psychiatric services to children at the University of Minnesota Medical School. In 1938, the Psychiatric Clinic for Children was established at the University Hospitals and Medical School, supported initially by the Commonwealth Fund and the Stevens Avenue Home for Aged Women and Children. After a five-year demonstration period, the University gradually assumed full support of this important service as an integral part of the Medical School and University Hospitals to culminate in the establishment of an in-patient psychiatric service to children in 1952. In addition to the increased service to children and their families, this development has contributed to the psychiatric and pediatric teaching program of the Medical School.

Other psychiatric services to children include the developments at the Mayo Clinic in the middle forties and the establishment of the Washburn Memorial Clinic in Minneapolis in 1950.

Another national trend has seen the utilization of the ancillary fields of clinical psychology and psychiatric social work in both neurology and psychiatry. In 1951, the University of Minnesota Department of Psychiatry and Neurology established a third branch, the Division of Clinical Psychology. This permitted a more effective use of the techniques of psychology, not only in clinical areas but particularly in research activities.

If one were to attempt to name the most significant historical change in psychiatry, it would probably be the fact that the field of psychiatry has made the transition from its isolated position in mental hospitals to joining forces with the en-

tire family of medicine. This has been reflected in many ways in both clinical practice and in teaching procedures. The years since World War II, at both a national and state level, have seen a marked interest on the part of both psychiatrists and non-psychiatrists in the orientation, for example, of the general physician toward those techniques of psychiatry which are useful in his everyday office practice. On his part, the psychiatrist has interested himself much more extensively in the everyday problems of medicine; for example those associated with the multitude of illnesses termed psychosomatic in nature. On his part, the internist, the general physician, and the surgeon have become interested in the psychological aspects of the illnesses which patients bring to them; and in turn these men have made real contributions to the field of psychiatry. Over the last quarter of a century, the field of psychiatry has found itself in a state of flux, this transition from the mental hospital to the general practice of medicine being one of the most significant. Another development which is just in its beginning, from the point of view of any large scale endeavor, is the marked interest in research and investigation with regard to psychological illnesses. It is highly likely that this development in the years ahead will spell one of the major contributions toward the more adequate understanding of these baffling illnesses.

During this same period, neurology has also shown a very definite change of emphasis from that of diagnosis and the care of the hopeless and chronically disabled neurologic patient to a more dynamic interest in total treatment and the care of all problems related to the nervous system, both acute and chronic. Diagnosis in the field of neurology has been expanded by the introduction of such procedures as air encephalogram, electroencephalogram, and more recently arteriogram. At the same time, a large number of newer therapies have become available for the treatment of many of the neurologic disorders such as the convulsive disorders, myasthenia gravis, neurosyphilis, subacute combined degeneration, parkinsonism, etc. This change in the emphasis of neurologic practice has been apparent in the increasing number of physicians who are taking specialty training in neurology as well as the increasing awareness of the practicing physician of neurologic problems. Research in the field of neurology has greatly expanded at the University of Minnesota and has seen a wide range of interests from the care of bulbar poliomyelitis to a new interest in the chemistry of the nervous system.

A HUNDRED YEARS OF PROGRESS IN THE THERAPY OF URINARY INFECTION

(Continued from Page 380)

Comment

It is never safe to be a prophet in a scene which is changing almost from day to day, as it is in the specialty of urology. Yet prognostication in any field of human endeavor is always inviting, sometimes fatally so. In the foregoing text an attempt has been made to point out very briefly the vast differences between the practice of urology a century ago and the practice of urology today. Some of the practitioners who helped to found the Minnesota State Medical Association learned what they knew about urology empirically; others had the benefits of the best formal training of the day. Their knowledge, in any case, was infinitesimal, and much of it was downright erroneous, in comparison with that possessed by the urologist of today. A hundred years from now, an overly hopeful seer might say, there might even be no urologists, simply because there will be no more worlds for the urologist to conquer.

Laboratory Aids to Medical Practice

Sponsored by

The Minnesota Society of Clinical Pathologists

RAPID FROZEN SECTIONS—THEIR VALUE IN DIAGNOSIS

MALCOLM B. DOCKERTY, M.D.

Rochester, Minnesota

"The paraffin sections will be rushed through and we should have the diagnosis by Tuesday." So familiar has become this pathologic proclamation that, even in this age of turbojets, clinicians and surgeons are prone to accept its implied policy of delay in terms of a modern miracle of speed. Yet, it is a fact that, with the exception of certain calcified elements such as bone and teeth, no solid tissue exists that cannot be readied for microscopic examination within minutes after its removal from the body. Pathologists are familiarizing themselves with certain fast-acting vital stains that impart to tissues a range of cytologic detail which heretofore has been impossible to obtain from similar tissues fixed for a matter of days and stained by time-honored techniques.

The present communication is intended to acquaint both general practitioner and surgeon with the advantages of exploring with their respective pathologists the possibilities offered by use of fresh frozen sections as a means of rapid diagnosis.

1. Is a specimen for biopsy representative? Even poorly prepared "slabs" of tissue are thin enough to allow for a decision as to whether the tissue is alive or dead. Nonviable tissue rarely discloses useful information after treatment by any method of fixation and sectioning and its identification as such demands further sampling by biopsy.

2. Has surgical excision encompassed the entire lesion? The answer to this vital question far too often has been disclosed by studies of "pickled" specimens. For benefits that rightly should accrue to the patient, determination of the limits of lesions, particularly new growths, should be done during operation. Nobody likes to sew "cancer to cancer," even for cosmetic results.

3. Is a malignant lesion primary or metastatic? Recently, I was consulted about a slide prepared from an ovarian tumor that had been removed from a young woman. The presence of unmistakable signet-ring cells made almost certain a diagnosis of gastric carcinoma, which later was established by gastric roentgenograms. The correct diagnosis could have been made by means of fresh frozen sections at laparotomy.

4. Is a lesion benign or malignant? The answer to this question often indicates the type of operation to be done. In more than 95 per cent of cases, this problem is settled immediately at the freezing microtome. In my opinion, malignant changes in such locations as the uterine cervix or fundus, the bladder, the breast, the thyroid, the brain and in bone—to list a few—are delineated just as clearly by the rapid freezing method as by routine paraffin techniques carried out several days later. When the lesion is a "debatable" one, it is always possible to withhold opinion and "stall for time with hematoxylin and eosin." Such lesions will frequently still be "debatable" after prolonged fixation, embedding and staining.

5. Is a lesion inflammatory or neoplastic? An excellent example of this diagnostic dilemma concerns the thickened pancreatic head in the patient who has obstructive jaundice. The issue can be resolved rapidly by use of the Silverman needle to secure deep cores of tissue. Microscopic examination of these fragments can be carried out by freezing almost as rapidly as the surgeon can remove them. Curettings from the interior of the common bile duct yield comparable information of a most useful nature to the surgeon who is con-

From the Division of Surgical Pathology, Mayo Clinic, Rochester, Minnesota.

templating performance of a Whipple operation or some other major procedure.

For the general practitioner, needle biopsy is coming into its own. Tissues so secured from the breast, prostate gland, thyroid, lymph nodes, spleen and liver all lend themselves to examination by the rapid freezing method. Consider the patient whose nodular liver possibly contains metastatic tumors. The clinician weighs the appreciable risk of exploratory laparotomy against the usefulness of information obtained thereby. However, with minimal risk, multiple sampling of these nodules can be done by means of the Silverman needle. Pathologic examination of these cores of tissue often settles a diagnosis that otherwise would require a week's hospitalization.

6. Finally, the method directs approaches to bacteriologic investigation. Many infections, particularly granulomas, require specific antibiotic therapy based on isolation of the causative organism. Use of fresh frozen sections may allow identification of the specific nature of these lesions; at least the method can suggest the necessity for special cultures of excised tissues. Paraffin blocks, on the other hand, make poor material for bacteriologic investigation.

These are but a few examples of the role of fresh frozen sections in diagnosis. For best results and to breed familiarity with the method, it should be employed routinely. Promotion of its use requires enthusiasm tempered with patience on the part of clinicians and surgeons, who must encourage in their colleague in the laboratory a sense of pride in his accomplishments in making correct diagnoses. They must not chide the pathologist for his reluctance to accept wholeheartedly what, at first, is to him an unfamiliar method for the examination of tissues. The pathologist, for his part, should recall that familiarity with the method breeds attempt.

* * *

This presentation, the fourth of a series of editorial reports designed to focus attention on aids to medical practice offered by the practitioner of laboratory medicine, outlines an important aspect of pathology that is tinged with the crimson of controversy among pathologists themselves. Although techniques of fresh frozen sections were first employed almost half a century ago, many freezing microtomes are gathering dust in long-forgotten corners of laboratory closets. Yet any method that, in the hands of a pathologist experienced in its use, can produce correct histologic diagnoses in more than 90 per cent of cases in a matter of a minute or two, deserves wider application than it is presently accorded. As Dr. Dockerty says, "Familiarity breeds attempt."

The Editorial Committee of the Minnesota Society of Clinical Pathologists welcomes ideas concerning this series of reports. Reprints of this article are available from either the author or the chairman of the committee.

GEORGE G. STILWELL, *M.D.*,
Chairman, Editorial Committee

Mayo Clinic,
Rochester, Minnesota

DERMATOLOGY IN MINNESOTA

(Continued from Page 377)

gral part of Minnesota dermatology as well as a strong national influence.*

Much more of dermatologic interest could be recalled: the unique characteristics of some of the earlier practitioners, the many sincere friendships and the almost complete lack of jealousies and bitterness, changes in the character and the techniques of practice in this field, and the extension of adequate dermatologic care over all of Minnesota. In all these features the story of dermatology parallels that of other fields of medicine in Minnesota and need not be recounted here.

*The close personal friendship and high mutual regard of Dr. O'Leary and Dr. Michelson have done much to unify, develop and expand dermatology in this area and to stimulate those who have worked with them. In character and in ability, as teachers and as physicians, they are not outranked anywhere in America.—F.W.L.

President's Letter

FOR THE BENEFIT OF THE SICK

With this issue, we officially commemorate the completion of 100 years of organized medicine in Minnesota. Because of this, it is altogether fitting that we should take a long look, both forward and backward, in an effort to see where we've been travelling and where we are going.

In looking back, we should remember that in the year of the Minnesota State Medical Association's founding, 1853, physicians, except for limited knowledge, were not essentially different from those of today. That is, they were constantly learning new scientific facts, were meeting to discuss new ideas, theories and experiments—and always with the thought in mind—"for the benefit of the sick."

After 100 years of medical organization in the state, that same theme, one of the key phrases in the Hippocratic oath, permeates medical practice as a whole and becomes the dominate motivating factor in medical progress.

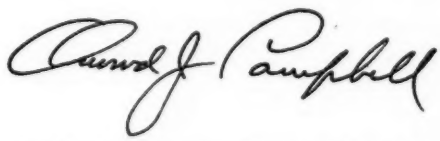
Through the trials of early organization in the Minnesota State Medical Association, the pioneer doctors of the state made rapid strides both in organizational work and in scientific knowledge. With the ravages of early disease in epidemic proportions, the Medical Association became instrumental in the establishment of a State Board of Health in 1872. Preventive medicine thus received impetus in the state.

In surgery, Minnesota was one of the pioneers. The introduction of anesthesia and methods of antisepsis were generally accepted in Minnesota well before 1890. Among the surgical "firsts" in the state was the first operation reported for removal of the gall bladder.

Association activities have increased and expanded greatly over the years. Public health education has been one of the most important, together with the fostering of ever higher standards for medical education. All these activities have been aimed at the goal "for the benefit of the sick." Medicine always has, and always will be, dedicated to that purpose.

In looking forward to the continuation and further expansion of these dedicated purposes, the medical profession of the state can be proud that Minnesota ranks high among other states in scientific, educational, social and moral progress.

And, although we are this year taking stock of what we, as a medical profession, have achieved, we cannot afford to look only backward. In spite of diversions, we must look forward to even finer improvements, and we must pledge ourselves in all sincerity to higher goals in better medical care for the benefit of the sick.



President, Minnesota State Medical Association

Editorial

CARL B. DRAKE, M.D., *Editor;* GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

STATE MEDICAL ASSOCIATION CENTENARY

THE YEAR 1953 is the centenary of the founding of the Minnesota State Medical Association. It was on July 23, 1853 that a small group of physicians living in the Minnesota Territory met and established the Minnesota State Medical Society.

It is interesting to pause from time to time on the occasion of certain anniversaries to review changes that have taken place in the different phases of our manner of living. Even fifty years ago, within the memory of many of us, there were no automobiles, aeroplanes, movies, radios, television sets, skyscrapers—to mention the outstanding inventions which have modified our way of living. If we go back a hundred years, life was still more primitive for there were then no telephones nor railroads—in Minnesota, at least.

When it comes to the field of medicine, the advances during the past hundred years, and more particularly in the past fifty years, have been phenomenal. The seriousness of many diseases and their very existence in certain instances has been eliminated. Consider, for instance, diphtheria, appendicitis, typhoid fever, pneumonia, mastoiditis, cholera infantum, diabetes mellitus, pernicious anemia. The progress made in medicine and public health has been reflected in the almost unbelievable rise in life expectancy and the improvement in health during the last century.

In an effort to call attention to the progress made in the medical field since our State Medical Association was founded a hundred years ago, this issue of the journal is being devoted to articles contributed by members in the various fields of medicine. They should prove to be interesting reading.

The annual meeting of the Minnesota State Medical Association will take cognizance of its hundredth birthday. An exhibit will display a typical doctor's office 100 years ago. An unusual number of out-of-state guests, including Sir Alexander Fleming and Dr. Richard R. Trail, both of London, will take part in the program.

The annual banquet will be held on Tuesday evening at the Saint Paul Hotel and will be addressed by Dr. O. J. Campbell, president of the State Association and Dr. Louis H. Bauer, president of the American Medical Association. The meeting will be featured by the popular round table discussions and symposia on Gastrointestinal Diseases, Fractures, Marginal Neuroses, Chest Diseases and Eye and Ear Diseases.

This year's meeting promises to be one of the largest in point of attendance. Fewer addresses will be given in deference to the longer time allotted to the visitors.

Attention is called to the program of the meeting which appears in this issue.

Remember the date—May 18-20; and the place—Saint Paul.

REORGANIZATION, WITH RESERVATIONS

A DRAMATIC and historic meeting of the AMA House of Delegates, which was attended and addressed by President Eisenhower, Federal Security Administrator, Mrs. Oveta Culp Hobby, Senator Robert Taft and Minnesota's Congressman Walter Judd, was held in the Statler Hotel, Washington, D. C., on March 14 for the single purpose of considering a reorganization of the Federal Security Agency. The reorganization plan, as submitted to Congress, includes renaming the department "Health, Education and Social Welfare," to be headed by Mrs. Hobby, with the probability of her becoming a cabinet member.

In 1884, the American Medical Association presented a resolution to the national government asking for a department of health, with a doctor of medicine in charge as a cabinet member. In the succeeding sixty-nine years, no such action has been consummated.

The reorganization plan for the new department divides the previous agency into health, education and social welfare. Immediately under the department head, according to the administration spokesman, there will be a doctor of medicine in charge of the division of health. To his attention

will come all matters of the entire department relating to health, and out of some more than eighty different agencies now handling health matters, the affairs of almost half of these will come over the desk of the medical director.

The arguments presented for the present reorganization plan were that it is a definite step toward placing health matters in the hands of a medical man who has not been associated in the past as a career man with the government's contacts with health matters. The reorganization plan specifies that qualification.

In the administration's plan of decentralization in Washington and replacement of problems, as far as possible, in state and local hands, this reorganized department will probably have coming under its direction an increasing number of agencies of the type where the national administration desires to return duties to the state and local levels. England has a Minister of Health of cabinet rank and of considerable central authority, which probably made it easier for England to convert to its present system of state medicine. This was presented at the meeting as an argument against having a medical department of cabinet rank.

Besides the speakers first mentioned, President Bauer of the American Medical Association and Chairman Murray of the AMA's Board of Trustees also discussed the reorganization.

The House of Delegates adopted a resolution prepared by the Board of Trustees endorsing the reorganization plan, but with a preamble or reservation that in the past the profession had felt that health activities should have cabinet rank in its own right and the American Medical Association in the future would feel at liberty at any time to criticize or offer suggestions or amendments to the reorganized department.

One immediate value of the reorganization plan is that the department will be able to place in charge of the divisions, people in sympathy with free enterprise and national decentralization of the agencies involved. Without the reorganization, department heads would be those who had been blanketed into the Civil Service and members appointed under the past administrations, and hence probably not sympathetic to the new viewpoint.

AMERICAN MEDICAL EDUCATIONAL FUND DRIVE

AS STATE and Sixth Councilor District Chairman of the American Medical Educational Fund Drive I would like to bring to your attention the pertinent details relating to this extremely important and worthwhile project sponsored by the American Medical Association.

As State Chairman of this educational endeavor, I met with the AMA committee in Chicago on January 25, 1953. Those in attendance were given a comprehensive outline of the aims and objectives of the Medical Educational Fund. The success of this project has broad and far-reaching implications which could well determine the future policies of our medical schools as well as indicate to the American people and our government how far we as doctors are willing to go in defense of the private practice of medicine in this country. We are fortunate in having the enthusiastic support and financial backing of many private industrial enterprises.

I should like to say here that after making a study of the AMEF, I believe it is a worthy cause. The medical schools of our country are the foundation of America's health. They turn out the doctors, medical scientists and researchers essential to economic and social progress. They train the medical manpower needed to staff our hospitals, health programs and the expanding practice of industrial medicine. To lower the standards of teaching or to reduce the medical manpower would be disastrous.

Careful and exhaustive studies indicate that our seventy-nine approved medical schools will require additional annual subsidies amounting to approximately ten million dollars. The funds must come either from government or private sources. It is obvious from the report submitted by the committee sounding out American business, that private industry prefers the latter. Both business and industry have already subscribed generously to this medical educational fund. However, many more thousands of doctors of medicine should respond in support and defense of their chosen profession.

Perhaps you are now asking, where does the need for such a large annual fund lie? Medical training is by far the most expensive field of education. The rapid increases in costs have been staggering. The average cost of training a doc-

tor has doubled in twenty years to $10,000. Tuition fees, raised 165 per cent since 1940, pay only one-fifth of this cost. Other factors contributing to the increased cost are: (1) lengthy period of training, (2) costly laboratory facilities, (3) high ratio of teachers to students, (4) complicated training techniques arising from recent scientific advances. Why doesn't each state-supported school increase its budget requests to cover its needs? The answer to this is the same as it always has been. Drastic cuts in budgets are set up for specific uses. Herein lies the difficulty—lack of unrestricted funds. Unrestricted funds can be used to augment the salaries of worthy underpaid faculty members, provide laboratory facilities, improved and expanded out-patient services for medical students, et cetera.

How are we, as doctors in active practice, to benefit?

The medical schools of our nation are graduating over 6,000 new doctors every year—doctors with new knowledge, new techniques, and vast new resources.

It should be clear to every physician that if medical schools continue to operate without proper finances, it will seriously damage the teaching system and ultimately lower the standard of medical practice in the United States. American physicians cannot afford to permit the weakening of their professional standards which are the backbone of a nation that enjoys the highest health levels in the world today, nor can they permit the creeping paralysis of government control to envelope their schools and ultimately dictate the standards of medical practice.

Give serious thought to this venture, in which each one of us must play a part, whether we give generously according to our means, or not at all. Your contribution can be designated to the school of your choice, in which instance every dime of it will be channelled back to that school by the National Fund. Funds given directly to any medical school do not become a part of the National Fund and cannot therefore reflect professional support, which in turn would have a bearing upon contingent donations from business and industry. Undesignated gifts will be prorated among the seventy-nine medical schools.

Bear in mind, contributions to the AMEF are tax exempt. Therefore, you can afford to be generous by allowing yourself a reduction in your taxes at the same time you are supporting a mighty worthy cause.

H. E. Drill, M.D., *Chairman Minnesota Division and Sixth Councilor District of American Medical Association Educational Fund Drive.*

FALSE PROPAGANDA

ONE of the most inexcusable examples of propaganda in its worst form was a movie which appeared over twelve television channels in California a few months back. The broadcast was sponsored by the International Association of Machinists. Just why this union should spend its money to mislead the public, we do not know.

The playlet, entitled "Without Fear," is a story based on statements assumed to be true that 325,000 Americans die annually because only one out of five can afford the costs of serious illness; that America needs three times as many physicians as we have; that America has only half the hospital beds it needs, et cetera.

A story is dramatized in which a parent of modest means calls a physician for a sick baby. One physician can't come, another won't, another demands preliminary assurance of an unreasonable fee ($15). The baby dies; care came too late after the distraught mother takes it to the hospital where she learns that the baby is the victim of neglect. The story brings in an overworked physician who just can't meet the demands on his time and energy.

The movie then goes on to explain that the shortage of physicians is due to the AMA which refuses to admit a shortage of physicians, for members find it to their advantage for a shortage to exist. Then it is told that if the government only ran the medical care of the people and that if the bills in Congress to accomplish this were only passed instead of being blocked by AMA lobbyists, all would be well.

No mention is made of the possibility that there are plenty of physicians in relation to the population; that the output of physicians is increasing at a faster rate than the general population; that the AMA is not responsible for the production of physicians by the medical schools; that the overall cost of medical care would probably be increased tremendously and the service would be of inferior quality under government control; that the experience with socialism in New Zea-

land, Australia and Great Britain has resulted in a reversal of public opinion.

This movie, "Without Fear," is a convincing proof that efforts to socialize the medical profession and the country have not been abandoned. The price of liberty is eternal vigilance.

GAMMA GLOBULIN FOR MEASLES AND HEPATITIS

Recently, the National Foundation for Infantile Paralysis completed negotiations for the purchase of the present inventory of certain processors of commercial gamma globulin as well as the future production by these same producers. In agreement with the American National Red Cross all gamma globulin processed from Red Cross donated blood, as well as the commercially produced gamma globulin purchased by the National Foundation, has been placed under control of the Office of Defense Mobilization. The National Foundation does not have in its possession or control any supply of the blood fraction.

It has been agreed by all parties concerned that gamma globulin will be available for measles prophylaxis and for use by physicians in the treatment of infectious hepatitis, irrespective of the resulting limitation of gamma globulin available for use in poliomyelitis epidemics.

The Office of Defense Mobilization will allocate the available gamma globulin through State and Territorial Health Officers for use in measles and infectious hepatitis, and will make additional distribution for the purpose of controlling poliomyelitis.

Physicians who are unable to purchase gamma globulin through their regular drug supply channels are advised to request supplies from their local or state health departments. There will be no charge for this gamma globulin, since the Red Cross has already paid for the processing and packaging of the material, and the National Foundation for Infantile Paralysis, through its arrangement with the commercial processors, has purchased the commercial supply at the same rate as that currently supplied defense agencies under governmental contract.

The National Foundation does not have gamma globulin available for distribution, nor will it determine how available supplies shall be used. That is the function of the Office of Defense Mobilization.

Since it has been obvious for some year and a half that gamma globulin would be in short supply, the above plan was agreed upon by all interested agencies, governmental, private and public, to avoid wasteful use of gamma globulin.—*National Foundation for Infantile Paralysis Release March 13, 1953.*

Only by a biopsy competently interpreted can the diagnosis of malignant lymphoma be anything more than a guess.

THE PROBLEMS OF TUBERCULOSIS CONTROL

Recent advances in the treatment of tuberculosis have raised for new consideration the question of proper balance among the procedures now employed in control of this disease.

During the period from 1900 to 1925 there was a rapid advance in diagnosis due to improved roentgenological techniques and bacteriological methods. Treatment, which, before 1925, had emphasized fresh air, proper food, and rest, acquired pneumothorax and collapse therapy. The second quarter century was one of accelerated development of case finding, hospitalization for purposes of isolation and care, a variety of measures for prevention, and finally social assistance for patients and their families.

This brings us to the opening of the third quarter. Optimists, watching the declining mortality from tuberculosis, predict its virtual eradication in the United States. Conservatives are concerned with the continuing high prevalence of known cases. In any event there is immediate urgency in co-ordinating and integrating the present measures. The decision as to the wisdom of a change or modification of our efforts will depend on our evaluation of the success of present measures of which a brief summary is presented for consideration.

Case Finding: There are three major methods of case finding today. The first is the discovery of cases by physicians engaged in private practice. Private practitioners are the ones most likely to have first knowledge of cases that have progressed to actual symptoms. The second is search for cases on a contact basis. This is essentially clinic practice and rests on the principle that one case of the disease comes from another. The third, mass roentgenographic surveys of large segments of the population, is organized on the sound theory that a large enough relatively inexpensive net will gather in most of the unknown cases.

Medical Treatment: Medical treatment has passed through the stages of primary emphasis on hygienic care, collapse therapy, surgical measures, and drug treatment, to the present period of a combination of chemotherapy and surgical practice, and effective rehabilitation. The cardinal requirement is the hospital bed for tuberculosis, and it is indeed the crux of present-day problems.

Prevention: Proper treatment is itself a large part of prevention because it removes sources of contagian from susceptible persons. In the best organized communities today, hospital treatment of the patient is supplemented by supervision and education of family at home. To this is added in small segments of our population, BCG vaccination.

Social Assistance: This varies all the way from abolition of the means test as a requirement for hospital admission to direct financial grants to a patient's family during the period of non-employment of the patient.

All social assistance programs include rehabilitation of hospital patients. Experience has shown that the patient's morale and faithfulness in taking treatment depend in large part on the support given his family in his absence.

Mortality: Tuberculosis mortality in the United States declined 90 per cent from 1900 to 1950. The mortality in 1950 was only half that of 1945. Tentative figures indicate that the death rate for 1951 was 20 per 100,000 population. A breakdown by race, sex, and age shows that the mortality rate in non-white persons is about three times that in white persons, and that more than half of all deaths from tuberculosis now occur after the age of forty-five years. The greatest number of deaths from tuberculosis today occurs in old white males.

Prevalence: It is agreed that the ***known*** prevalence of the disease has declined little in the last twenty years. Failure to decline is due, in part, to improved case-finding procedures and increased longevity of patients. The total number of cases of active disease in the United States is 400,000, approximately 250,000 of which are known to health departments.

Incidence: The average annual incidence of new cases reported in the whole country has been about 120,000 in recent years. The figure was 118,000 in 1951, a drop of 19,000 cases from the 137,000 in 1948. This drop is probably significant.

Hospitalization: Hospitalization is recognized as the core of tuberculosis control. Until recently the minimum number of beds required for adequate control was judged to be two and a half times the number of deaths from tuberculosis annually in the community. Three beds per annual death were recommended. Many communities are still far from meeting the minimum standard but some substantially exceed it. At present in the United States approximately 102,000 beds are set aside specifically for tuberculosis. The standards in the future may be based on known prevalence rather than deaths.

Cost of Tuberculosis Program: The annual total cost of tuberculosis control in the United States is calculated as $350,000,000, exclusive of construction expense and the cost of training personnel. This includes the sums spent on hospitalization, which is figured at $200,000,000 a year, or more than half the cost of the whole tuberculosis program. Finally, we may note that the average cost of one case of tuberculosis is about $15,000.

With this background, what is the best plan for tuberculosis control in the future? Two courses are obviously open, viz., (1) to keep on as we are doing, improving procedures whenever possible, and (2) to revise the program by introduction of some new principle. We may rest reasonably well assured that in time the first of these procedures will relegate tuberculosis to a minor position among diseases, though only at great cost. It will mean a steady increase in measures for case finding, more hospital beds and larger sums for rehabilitation. If inflation continues, the dollar cost will be magnified. Even so, the price might be small in comparison with allowing tuberculosis to persist in our population.

A better course cannot be outlined now, but some elements of the program merit careful scrutiny. The hospital program costs $200,000,000 and this will probably be increased. The internist may inquire if full advantage is being taken of the powerful force of private practice in supplementing hospital care. Hospitalization in effect does not provide for all the tuberculous patients in need of care, and many hospitals have waiting lists. The latest and best methods of surgery and chemotherapy have not shortened but freqeuntly have lengthened the optimum period of hospital stay.

Herein, however, lies one possible change in which the private practitioner is concerned. After completion of the necessary active therapy and the accompanying indoctrination in personal care, could not the time-consuming final steps in the cure, particularly the essential long continued chemotherapy, be carried out at home, with safety and success, by private physicians?

This suggestion may have merit. Much depends on improved understanding of tuberculosis by physicians in general practice and on the character of the homes in which treatment is given. Tuberculosis is most prevalent today in the economically underprivileged. The problem is not purely medical, but is inextricably bound up with social issues. There is reason to hope that the standard of living will continue to rise. In the meantime, more intelligent application of the skills of practicing internists may solve part of the problem. Competent home after-care of tuberculous patients who have had a satisfactory course of institutional treatment, is one possible way of saving hospital time and relieving bed shortages.—By ESMOND R. LONG, M.D., *Annals of Internal Medicine,* November, 1952.

WANTED—Millions of Miracle Makers!

Over 60 million Americans can be miracle makers. You are probably one of them. Any person from 21 to 59 who is in good health and weighs 110 pounds or more is eligible.

The miracle you can perform is saving human life. Yes, you can really help save precious lives. And it is important that you do it right now!

Although the miracle of saving human life challenges the imagination, you can do it with a little of your blood. In less than an hour you can simply and painlessly donate a pint of your blood to help someone live.

The National Blood Program is calling on you to help in this miracle making business so that no one here at home or our men fighting in Korea need die for want of this vital substance.

You are needed at your local Blood Donor Center now. Call your local Red Cross Chapter to schedule your donation today.

Medical Economics

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

FACILITIES INCREASE FOR RURAL MEDICAL CARE

The eighth National Conference on Rural Health, held in Roanoke, Virginia, on February 27 and 28, was told that medical care facilities in rural areas are increasing rapidly through the cooperative, voluntary efforts of medical, farm and community groups.

The report was made by Dr. Louis H. Bauer, president of the American Medical Association, who told delegates, "All groups are cooperating in an effort to bring the highest standards of medical care to rural areas. No one organization can do the job by itself. It requires community effort."

States Past Difficulties

Dr. Bauer outlined past difficulties which rural communities encountered in obtaining physicians for their areas. He said:

> "One of the difficulties in the past has been the developing of some means to attract physicians to those regions lacking them. A physician who has spent 8 to 13 years of his life in being trained to practice modern medicine is not willing to settle in an area where there are no facilities for practicing such a type of medicine. Increasing the number of physicians will not do it, as they would still tend to congregate in cities."

Dr. Bauer pointed out that in some states, the problem has been solved by the community, which provides medical facilities and then permits the physician to rent those facilities or to buy them through gradual payments. "Where this has been done, physicians have been obtained," he stated. He noted, too, that in these days of good roads and automobiles a physician can cover a wider territory than before, and is able to take care of more people. He concluded that, "every community does not need a hospital so long as one is available within a reasonable distance and good roads lead to it."

No Santa Claus Program

The solution to many of the rural health problems is being found without the aid of statism theories, reported Dr. F. S. Crockett, chairman of the American Medical Association's Council on Rural Health.

Dr. Crockett said that in the planning for adequate medical care in small communities, one of the uppermost points has been that "there was to be no Santa Claus in the picture." He noted that much group strength has been obtained through the establishment of rural health councils, made up of all facets of community life, without extra Santa Claus aid from governmental agencies. "These councils," he said, "in many instances have brought about the elimination of health hazards and have taught simple health rules to improve conditions."

Since 1946, Dr. Crockett stated, many doctors have settled in villages, and he added that, "it is in communities on the lower economic income level that the greatest challenge exists. Places with poor schools, churches, roads, homes and farms go hand in hand with inadequate medical care."

Health Insurance Gains

The vice chairman of the AMA's Council on Rural Health, Dr. Carll S. Mundy, who told the delegates that voluntary group health and accident insurance coverage of farmers and their families, as an economical means for them to meet medical care costs, is on the increase. He noted that successful groups have been formed within farm organizations, among church members and among depositors of rural banks. In contrasting procedure of farm and city health insurance groups, Dr. Mundy stated: "Since payroll deduction is impossible for farm families, some other satisfactory and economical arrangement must be made to collect and forward premiums for the group."

The meeting drew more than 600 representa-

tives of medical, agricultural, university extension services and other groups wth a combined membership of several millions. Forty-two states and the District of Columbia were represented at the conference.

The delegates were informed of many of the reasons why rural areas seemed to lack physicians. Dr. Paul D. Sanders, editor of the *Southern Planter,* blamed medical care problems in the rural areas of the South on the advantages of larger cities which draw doctors, dentists and nurses along with other segments of the rural population. He felt that another factor has been the backwardness of the South in modernizing its farming activities.

Local Examples Cited

Many speakers told of how communities had worked together to make their area attractive to a new doctor. One cited a small town whose residents organized, and with the help of the local farm organization, the county medical society and the state council on health and medical care, interested a young doctor in starting his practice there. They provided him with a building for a clinic and a place to live. Today, the clinic serves weekly from 250 to 300 patients from a widespread area. Another Southern community passed three bond issues to obtain a 55-bed hospital.

The theme of the meeting, "Widening the Highways to Health," was presented to the delegates by speakers from all phases of medical and rural life.

COMMISSION FORMED TO STUDY TAXES, SOCIAL SECURITY

A newly formed federal commission to study taxes and social security will begin work at once, to complete the study in one year. The commission, formed at the suggestion of President Eisenhower, is composed of Congressional, federal and state officials and will scrutinize federal-state relations in the fields of taxes and health and social security, and is authorized to recommend legislation.

Membership will include representatives named by the President, plus others designated by Congress and by the State Governors' Conference.

The commission originated at a White House meeting in February which was attended by representatives of the governors, Congress and the executive branch. President Eisenhower later issued a statement saying that the federal social security system warrants study. He stated:

"This analysis should encompass not only the distribution of costs between the state and the federal government, but also the operation and coverage of the system itself. It is a proper function of government to help build a sturdy floor over the pit of personal disaster. . . . However, we are equally committeed to carrying out that great program efficiently and with greatest benefit to those it is designed to help."

Meanwhile, Daniel A. Reed, chairman of the House Ways and Means Committee, has appointed a seven-man subcommittee to make an "extensive study" of the entire social security system. It is the hope of Representative Reed that no legislation will be enacted in this field until the study is completed.

SURVEY SHOWS GP FARES WELL

According to the seventh *Medical Economics* survey, the average general practitioner in the United States is better off financially than at any time in the past.

That fact came as the result of answers to questionnaires sent to general practitioners last April by *Medical Economics* magazine. These doctors constitute a representative cross-section of the profession, and the information they supplied covers many phases of the economics of private medical practice in America, the magazine contends.

This information, as reported in "Public Health Economics," shows that "the independent GP reports an average gross income, for instance, of $23,766 for 1951. His net income in that year, before taxes, was $14,098—a rise of almost 50 per cent since 1947, and of more than 100 per cent since 1943."

Another factor is apparent from the survey:

"Meanwhile, the financial gap that once separated him from his specialist colleague is narrowing. In 1943, he netted little more than half as much as the average specialist. In 1947, he netted about two-thirds as much. Nowadays he nets about four-fifths as much."

Increase Analyzed

Reasons for the fact that the general practitioner's increase in income are stated in the survey: "For one thing, he puts in longer hours than most other doctors—an average of sixty-two a week. So when his income is figured on an hourly basis, it becomes a shade less impressive. . . . Then, too, consider the brisk working pace of

the G.P. He sees thirty-one patients in a typical day. . . . His total operating costs amount to $9,668—or 41 per cent of his gross from practice. Office rent and automobile upkeep . . . are big items; but salaries, drugs, and supplies are even bigger, accounting in the aggregate for more than half his total professional outlay."

Income in "Dribbles"

However, the report states the income of the general practitioner comes to him in "dribbles" which rather offset the value of his expanded facilities and increased income. The report explains:

". . . today's GP still gets most of his income in dribbles: a median of $3 for an office call, $5 for a house call, $6 for a night call. Fortunately, he's been collecting more of his accounts of late; he now actually gets about 85 per cent of the money his patients owe him—a big improvement over the depression years, when he thought himself lucky to get 70 per cent."

Insurance Payments Aid

Not all of the doctor's income comes directly from his patients. The report notes that payments from Blue Shield and other medical-surgical plans are becoming more and more important to the general practitioner. For instance, in 1951, these plans paid him an average of $2,136, which amounts to about two-thirds of the amount that such plans paid the average specialist.

Comparisons on a general economic basis were made between the specialist and the general practitioner. The survey reports them as follows:

"(1) Collections are somewhat less of a problem to the specialist than to the GP. The average specialist collects 88 per cent of his accounts (as against the GP's 85 per cent), and takes in $3,206 a year from Blue Shield and other health plans (compared with the GP's $2,139).

"(2) The average specialist, like the average GP, reaches his income peak between his tenth and nineteenth years in practice. His income falls off rather steadily after that.

"(3) The highest incomes for specialists show up in cities of 50,000-500,000; the lowest, in places of under 50,000 and in very large metropolitan areas. . . ."

Of the million hospital beds needed during the next 15 or 20 years, two-thirds will be for the chronic sick, including mental and tuberculous patients.—A. P. MERRILL, M.D., *New York State Medical Journal*, October 1, 1952.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

230 Lowry Medical Arts Building
Saint Paul, Minnesota

Julian F. DuBois, M.D., Secretary

LICENSE OF MINNEAPOLIS PHYSICIAN REVOKED FOR NARCOTIC VIOLATION

Re United States of America vs. Russell R. Heim

On February 13, 1953, the medical license of Russell R. Heim, M.D., sixty-six years of age, Wesley Temple Building, Minneapolis, was revoked by the Minnesota State Board of Medical Examiners. Dr. Heim's license was revoked following his conviction in the United States District Court at Minneapolis. A jury found Dr. Heim guilty on 229 counts in the indictment returned against him by the grand jury alleging violations of the Harrison Narcotic Act. On November 10, 1952, Dr. Heim was sentenced to a term of four years in a Federal Prison by the Hon. Gunnar H. Nordbye, Judge of the United States District Court. Dr. Heim is serving his sentence at the United States Reformatory at Milan, Michigan.

Dr. Heim, at the time of his conviction, was the Coroner of Hennepin County. He received his M.D. Degree in 1910 at the University of Illinois. He was licensed in Minnesota by reciprocity in 1919.

LICENSE OF BELGRADE, MINNESOTA, PHYSICIAN SUSPENDED FOR THREE YEARS

Re George F. Engstrom, M.D.

On February 14, 1953, the license to practice medicine held by George F. Engstrom, M.D., forty-nine years of age, Belgrade, Minnesota, was suspended by the Minnesota State Board of Medical Examiners for a period of three years. Dr. Engstrom was found guilty by the Minnesota State Board of Medical Examiners of immoral, dishonorable and unprofessional conduct, as defined by law. Dr. Engstrom admitted that between the 1st day of January 1949 and the 18th day of June 1952, he had prepared "numerous fictitious, fraudulent and excessive claims for remuneration for professional services * * *." The fictitious, fraudulent and excessive claims made out by Dr. Engstrom were submitted to various insurance companies and other groups covering hospital and medical care benefits, including Blue Cross and Blue Shield.

It was the opinion of the Minnesota State Board of Medical Examiners that Dr. Engstrom's misconduct warranted a permanent revocation of his license. However, in view of the fact that Dr. Engstrom made full and complete restitution to all of the insurance companies involved, as well as to Blue Cross and Blue Shield, some measure of leniency was extended to him. The Medical Board warned, however, that such leniency may not be extended in the future if there is evidence that other physicians in Minnesota are involved in similar practices. Dr. Engstrom, in connection with the same matter, on July 14, 1952, entered a plea of guilty in the District Court of Ramsey County, to an information charging him with grand larceny in the second degree. Dr. Engstrom is to be sentenced on May 4, 1953, for that offense.

Dr. Engstrom was born in Sweden on April 5, 1903, and received his M.D. degree from the University of Minnesota in March 1928. He was licensed by the Minnesota State Board of Medical Examiners in July 1927, by examination upon receiving his Bachelor of Medicine Degree. He has been located at Belgrade, Minnesota, since August 1928.

Minnesota State Medical Association

One Hundredth Anniversary Meeting

Saint Paul, Minnesota

May 18, 19 and 20, 1953

Program

BUSINESS SESSIONS

SATURDAY, MAY 16

Hotel Saint Paul

2:00 P.M.—Council.....Room 334
6:00 P.M.—Council.....Room 234

SUNDAY, MAY 17

Hotel Saint Paul

8:30 A.M.—Council.....Windsor Room
10:00 A.M.—Reference Committees.....
Rooms to be assigned
1:30 P.M.—House of Delegates.....Continental Room
8:00 P.M.—House of Delegates.....Continental Room

MONDAY, MAY 18

Hotel Saint Paul

8:30 A.M.—Council.....Windsor Room
12:15 P.M.—House of Delegates.....Continental Room

TUESDAY, MAY 19

Hotel Saint Paul

8:30 A.M.—Council.....Windsor Room
8:30 A.M.—Committees.....Rooms to be assigned

WEDNESDAY, MAY 20

Hotel Saint Paul

8:30 A.M.—Council.....Windsor Room
8:30 A.M.—Committees.....Rooms to be assigned

SOCIAL EVENTS

MONDAY, MAY 18

Luncheons

American Medical Women's Association, Inc., Minnesota Chapter

12:15 p.m., Women's City Club

Make reservations through the secretary, Dr. Catherine Burns, 201 S. Broadway, Albert Lea, or Dr. Nellie Barsness, 540 Lowry Medical Arts Building, St. Paul 2.

Open to all visiting women doctors. Dr. Marie Bepko will discuss the International Convention in Vichy, France, and will illustrate her talk with colored slides.

Minnesota Medical Foundation

12:15 p.m., Casino, Hotel Saint Paul

Speaker: Dr. E. T. Bell, Emeritus Professor of Pathology, University of Minnesota, discussing some of the past history of the Medical School.

Tickets should be obtained from Dr. Wesley W. Spink, University Hospitals, Minneapolis 14. Price $1.75.

Dinners

Minnesota Chapter, American Academy of General Practice

5:00 p.m., Social Hour, Fiesta Room, Hotel Lowry

6:00 p.m., Dinner, Main Ballroom, Mezzanine, Hotel Lowry

Speakers: Dr. Harold S. Diehl, Dean, Medical School, University of Minnesota; Hon. C. Elmer Anderson, Governor of Minnesota; Congressman Walter Judd, M.D.

Tickets at $5.00 each should be obtained in advance from Dr. Emil J. Fogelberg, 45 N. Snelling Avenue, St. Paul. Open to all physicians.

Minnesota Radiological Society

7:30 p.m., Minnesota Club, 317 Washington St.

Speaker: Dr. Joseph C. Bell, President, Radiological Society of North America, Louisville, Kentucky, who will discuss "The Private Practice of Radiology."

Special Meeting

Nu Sigma Nu

5:00 p.m., Social Hour, Windsor Room, Hotel Saint Paul

TUESDAY, MAY 19

Dinners

Presidential Reception

5:30 to 6:45 p.m., Casino, Hotel Saint Paul

Physicians and their wives attending the annual banquet will be guests of the Physicians and Hospitals Supply Company and the Ulmer Pharmacal Company, Minneapolis.

Annual Banquet, Minnesota State Medical Association

7:00 p.m., Continental Room, Hotel Saint Paul

WEDNESDAY, MAY 20

Luncheon

Minnesota Chapter, American College of Chest Physicians

12:15 p.m., Room 234, Hotel Saint Paul

Dinner

Minnesota Society of Clinical Pathologists

6:30 p.m., St. Joseph's Hospital, Saint Paul.

GENERAL SESSIONS

MONDAY, MAY 18

A.M.

8:30 Visit Scientific and Technical Exhibits..... Auditorium

9:00 CANCER OF THE LUNG. Auditorium Theater
The Clinical Aspects of Bronchogenic Carcinoma
ALTON OCHSNER, The William Henderson Professor of Surgery and Chairman of the Department of Surgery, School of Medicine, Tulane University of Louisiana, New Orleans, Louisiana

9:30 The Role of Chest X-Ray Surveys in Diagnosing Bronchogenic Carcinoma
RICHARD R. TRAIL, St. Joseph's Hospital Centennial Lecturer, London, England

10:00 Question-and-Answer Period

10:15 **Intermission**

Visit Scientific and Technical Exhibits..... Auditorium

11:00 Infectious Diseases of the Heart Other Than Rheumatic Fever.....Auditorium Theater
THOMAS J. DRY, Rochester

11:30 Antibiotics in Heart Disease
SIR ALEXANDER FLEMING, M.D., F.R.S., Director, St. Mary's Wright-Fleming Institute, London, England

Afternoon

P.M.

12:15 Miscellaneous Luncheons

1:30 Visit Scientific and Technical Exhibits..... Auditorium

2:00 GASTROINTESTINAL DISEASE..... Auditorium Theater
Russell D. Carman Memorial Lecture
Problems in the Roentgen Diagnosis of Bleeding Lesions of the Upper Gastrointestinal Tract
JOSEPH C. BELL, President, Radiological Society of North America, Louisville, Kentucky

2:30 Massive Hemorrhage of the Upper Gastrointestinal Tract
JOHN M. DORSEY, Associate Professor of Surgery, Northwestern University, Chicago, Illinois

2:50 Peptic Ulcers
OWEN H. WANGENSTEEN, University of Minnesota

3:15 **Intermission**

Visit Scientific and Technical Exhibits..... Auditorium

4:00 SYMPOSIUM ON FRACTURES..... Auditorium Theater
Hand and Finger Fractures
WESLEY H. BURNHAM, Minneapolis
Wrist Fractures....EDWARD H. JUERS, Red Wing
Sprains of the Ankle. D. K. MILLETT, Minneapolis
The Timing of Fracture Treatment
FRANK S. BABB, Saint Paul

5:00 Visit Scientific and Technical Exhibits..... Auditorium

5:15 Obstetric Manikin Demonstration....Stem Hall
PAUL N. LARSON, Minneapolis

6:00 Special Dinners

9:00 Open House

TUESDAY, MAY 19

A.M.

8:30 Visit Scientific and Technical Exhibits..... Auditorium

9:00 Sterility in the Male.....Auditorium Theater
HAROLD J. WALDER, Duluth

9:20 Sterility in the Female.....
LOUIS L. FREIDMAN, Saint Paul

9:40 Venous Thrombosis.....ALTON OCHSNER, The William Henderson Professor of Surgery and Chairman of the Department of Surgery, School of Medicine, Tulane University of Louisiana, New Orleans, Louisiana

10:15 **Intermission**

Visit Scientific and Technical Exhibits..... Auditorium

11:00 Use of Radioactive Substances in the Treatment of Disease.....Auditorium Theater
J. E. RALL, Memorial Center, New York, New York

11:30 Carcinoma of the Ovary with Special Emphasis on Prevention, Early Diagnosis and Recent Advances in Therapy
WILLIAM C. KEETTEL, Associate Professor of Obstetrics and Gynecology, State University of Iowa, Iowa City, Iowa

Afternoon

P.M.

12:15 Round-Table Luncheons

1:30 Visit Scientific and Technical Exhibits..... Auditorium

2:00 MARGINAL NEUROSES IN EVERYDAY PRACTICE.....Auditorium Theater
Introductory Orientation
NORMAN JOHNSON, Minneapolis
The Patient Consults..F. J. HIRSCHBOECK, Duluth
The Pathogenic Parent
LOUIS L. FLYNN, JR., Saint Paul
The Dynamic of Emotions
HOWARD P. ROME, Rochester
Facts and Fallacies in Therapy
NORMAN JOHNSON, Minneapolis

3:15 **Intermission**

Visit Scientific and Technical Exhibits..... Auditorium

4:00 Intracellular Parasitism with Special Reference to Rocky Mountain Spotted Fever.....
Auditorium Theater

JAMES R. DAWSON, JR., Professor and Head, Department of Pathology, University of Minnesota Medical School,

4:30 Some Aspects of Diagnosis, Treatment and Prognosis of Erythroblastosis
BRUCE CHOWN, Winnipeg, Canada

5:00 Visit Scientific and Technical Exhibits.....
Auditorium

5:15 Obstetric Manikin Demonstration....Stem Hall
GEORGE E. ROGERS, Detroit, Michigan

7:00 Annual Banquet.....
Continental Room, Hotel Saint Paul

WEDNESDAY, MAY 20

A.M.

8:30 Visit Scientific and Technical Exhibits.....
Auditorium

9:00 MEDICINE'S SOCIO-ECONOMIC PROBLEMS.....Auditorium Theater

The Doctor and His Estate
MR. H. A. BLACKMUN, Rochester

The Doctor as a Medical Witness
MR. RAYMOND A. SCALLEN, Minneapolis

A Country Newspaperman Wants More "Horse and Buggy" Doctors
MR. ALAN C. MCINTOSH, Luverne

The Doctor as a Citizen
MR. WARREN E. BURGER, Assistant Attorney General of the United States, Washington, D. C.

10:15 **Intermission**

Visit Scientific and Technical Exhibits.....
Auditorium

11:00 The Lupus Erythematosus Problem.....
Auditorium Theater
HENRY E. MICHELSON, Minneapolis

11:30 Arthur H. Sanford Lectureship in Pathology
Coroner Versus Medical Examiner
ALAN RICHARDS MORITZ, Professor of Pathology and Director of the Institute of Pathology, Western Reserve University, Cleveland, Ohio

Afternoon

P.M.

12:15 Round-Table Luncheons

12:15 Special Luncheon

1:30 Visit Scientific and Technical Exhibits.....
Auditorium

2:00 SYMPOSIUM, MINNESOTA CHAPTER OF THE AMERICAN COLLEGE OF CHEST PHYSICIANS .....Auditorium Theater

The Minnesota Medical Profession and Tuberculosis
J. ARTHUR MYERS, University of Minnesota

Intrathoracic Tumors: Clinical Manifestations and Surgical Treatment
STUART W. HARRINGTON, Rochester

3:00 SYMPOSIUM, MINNESOTA ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY .....Auditorium Theater

The Control of Nosebleed
O. E. HALLBERG, Rochester

The Red, Sore Eye
MALCOLM MCCANNEL, Minneapolis

12:15 ROUND TABLES, TUESDAY, MAY 19

Hotels Saint Paul and Lowry

Differential Diagnosis of Jaundice
C. J. WATSON, Minneapolis

Benign and Malignant Tumors of the Rectum
R. J. TENNER, Minneapolis

Varicose Veins in Pregnancy
FRANK W. QUATTLEBAUM, Saint Paul

Urinary Infections
B. A. SMITH, Minneapolis

Psychosomatic Factors in Dermatology
M. G. FREDRICKS, Duluth

The Mentally Deficient Child—A Medical Problem
REYNOLD A. JENSEN, University of Minnesota

Treatment of Back Pain
WALLACE H. COLE, Saint Paul

Trends in Treatment of Blood Dyscrasias
CHARLES F. STROEBEL, Rochester

Treatment of Constipation
J. ALLEN WILSON, Saint Paul

Bleeding in the Third Trimester of Pregnancy
GEORGE E. ROGERS, Detroit, Michigan

WEDNESDAY, MAY 20

Management of Premature Labor
JOHN A. HAUGEN, Minneapolis

Treatment of Painful Shoulder
MARK B. COVENTRY, Rochester

Treatment of Diarrhea
R. S. YLVISAKER, Minneapolis

Office Gynecology
DONALD W. FREEMAN, Minneapolis

Anticoagulant Therapy
JOHN J. BOEHRER, Minneapolis

Selection of Patients for Cardiac Surgery
H. B. BURCHELL, Rochester

Diabetes in Childhood
ROBERT A. ULSTROM, University of Minnesota

Fluid and Electrolyte Balance
ARNOLD J. KREMEN, University of Minnesota

The Problem of Dizziness
A. C. HILDING, J. J. COLL, GORDON J. STREWLER, Duluth

Resuscitation of the Newborn
ELLIS N. COHEN, Saint Paul

Inhibition of Excess Parasympathetic Stimuli in Peptic Ulcer with Banthine®

Medical literature now contains more than 200 references to the beneficial role of Banthine Bromide (brand of methantheline bromide) as evidenced by a marked healing response of peptic ulcers. Rapid symptomatic improvement, particularly with reference to pain relief, is followed by roentgenographic demonstration of crater filling.

The therapeutic action of the drug in decreasing hypermotility and hyperacidity, together with the remarkable early subjective benefit, is indeed a desired approach in ulcer management.

Treatment is individualized to the patient's needs. One or two tablets (50 to 100 mg.) is administered every six hours, around the clock, in conjunction with appropriate diet control and antacid medication as indicated.

Banthine is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Searle: Research in the Service of Medicine.

Ulcer Facies Composite

✦ Reports and Announcements ✦

ST. JOSEPH'S HOSPITAL CENTENNIAL

The following scientific program, in celebration of the 100th anniversary of the founding of St. Joseph's Hospital, Saint Paul, will be held in the Saint Paul Auditorium on the morning and afternoon of Saturday, May 16, 1953. A banquet in the evening will be held at the Saint Paul Hotel. Physicians are cordially invited to attend the sessions, and the banquet will be open to the public.

Sunday, May 17, will be devoted to religious services at the Saint Paul Cathedral in the morning, with a program of addresses at St. Joseph's Hospital in the afternoon.

Morning Session—9:00–12:00 M.

Presiding: JUSTUS OHAGE, M.D.

Invocation—THE REVEREND FRANCIS W. CURTIN, Bishop's Representative for Hospitals, Director of Diocesan Bureau of Charities

Message from the Minnesota Medical Association—O. J. CAMPBELL, M.D., President, Minnesota Medical Association

Message from the Ramsey County Medical Society—PHILIP F. DONOHUE, M.D., President, Ramsey County Medical Society

"Humoral vs. Nervous Control of the Gallbladder"—EDWARD BOYDEN, M.D., Professor and Chief, Department of Anatomy, University of Minnesota

"The X-Ray Diagnosis of Gallbladder Disease"—BYRL R. KIRKLIN, M.D., Chairman of the Section of Radiology, Mayo Clinic, Rochester, Minnesota

"Coronary Disease and the Gallbladder"—THOMAS J. DRY, M.D., Chairman of the Section of Cardiology, Mayo Clinic, Rochester, Minnesota

"Indications and Precautions in Cholecystectomy"—WARREN H. COLE, M.D., Professor of Surgery, University of Chicago, Illinois

"Tissue Permeability"—WILLIAM BOYD, M.D., Professor of Pathology, University of British Columbia

Intermission—11:10–11:20 A.M.

Presiding: O. J. CAMPBELL, M.D.

President of Minnesota State Medical Association

"Experiences in Mass Photofluorography"—RICHARD TRAIL, M.D., London, England

"Coagulation of the Blood"—ARMAND J. QUICK, M.D., Professor of Biochemistry, Marquette University

Afternoon Session—2:00–4:00 P.M.

Presiding: EUGENE M. SCOTT, M.D.
Chief of Staff, St. Joseph's Hospital

Invocation—THE REVEREND JOSEPH KUNCL, Director of Archdiocesan Council of Catholic Nurses, Chaplain of St. Joseph's Hospital

"The Development of Bronchoscopy"—CHEVALIER L. JACKSON, M.D., Professor of Otolaryngology, Temple University, Philadelphia

"Psychiatry and Religion"—FRANCIS J. BRACELAND, M.D., Psychiatrist-in-Chief, The Institute of Living

"The Discovery of Penicillin"—SIR ALEXANDER FLEMING, M.D., Nobel Prize Winner in Medicine

Announcements

Intermission—3:00–3:20 P.M.

"Women in Medicine"—BURGESS LEE GORDON, M.D., President, Woman's Medical College, Philadelphia, Pennsylvania

"The Discovery of Cortisone"—PHILIP S. HENCH, M.D., Nobel Prize winner in Medicine, Department of Medicine, Mayo Clinic, Rochester, Minnesota

Evening Activities—7:00 P.M.

Centennial Banquet—Continental Room, Hotel Saint Paul

Toastmaster: THE VERY REVEREND GEORGE E. RYAN

Greetings from Civic and Professional Representatives

The State of Minnesota
The City of Saint Paul
American Medical Association
PRESIDENT LOUIS H. BAUER, M.D. (tentative)
American College of Surgeons
PRESIDENT HAROLD L. FOSS, M.D.
American College of Physicians
PRESIDENT LEROY H. SLOAN, M.D.

Address by THE MOST REVEREND JOHN GREGORY MURRAY, Archbishop of Saint Paul

Morning Services—11:00 A.M.

Solemn Pontifical Mass and Sermon—THE MOST REVEREND JOHN GREGORY MURRAY, Archbishop of Saint Paul, St. Paul Cathedral

Afternoon Program—2:30–3:30 P.M.

St. Joseph's Hospital

"The Place of the Hospital in the Community"—RIGHT REVEREND MNGR. C. A. TOWELL, President of the Catholic Hospital Association

"The Spiritual Concept of Hospital Care"—THE REVEREND JOHN J. FLANAGAN, S.J., Executive Director, The Catholic Hospital Association

---

INTERNATIONAL ACADEMY OF PROCTOLOGY

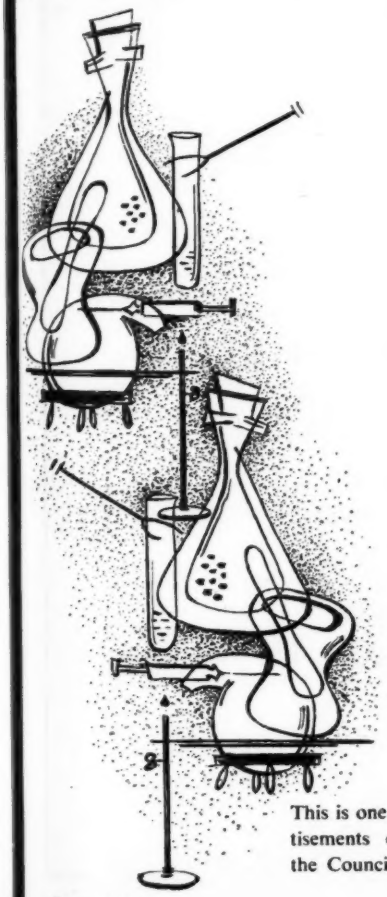
All physicians are cordially invited to attend the Fifth Annual Convention of the International Academy of Proctology to be held at the Plaza Hotel, New York City, May 29, 30 and 31, 1953, directly preceding the American Medical Association meeting. The meeting this year will be extended to include a Surgical Clinic and Seminar at Jersey City Medical Center under the direction of Dr. Earl J. Halligan. The "Wet Clinic" and Seminar will be on May 28. An extensive Motion Picture Seminar of Proctologic Surgery (including office techniques) will be held on May 31. All scientific papers will present the latest developments in proctology and gastroenterology.

Because general practitioners, as well as gastroenterologists and proctologists, face proctologic problems in their daily practice, much of the program has been planned to answer their questions.

There is no fee for attendance at the annual convention of the International Academy of Proctology. These conventions, as well as all other activities of the Academy, are directed toward the further development

(Continued on Page 404)

What is the status of____?



Many times you have asked yourself, "Is the indicated drug Penicillin . . . Chloramphenicol . . . Aureomycin . . . Sulfadiazine . . . a combination . . . or what?" This same problem may confront you many times . . . not only with the antibiotics—but actually in any specific field where there are numerous drugs . . . and you are faced with the problem of determining which might be the therapy of choice for a given condition.

The need for such clarification has always been apparent to the Council on Pharmacy and Chemistry of the American Medical Association. Its frequent publication of special status reports in THE JOURNAL is designed to help answer such questions for you.

Information about new drugs—clinically proved indications . . . experimental uses . . . correct dosages . . . contra-indications . . . and similar facts—is frequently presented by the Council. Its announcements of newly accepted products also help keep you up-to-date on new and useful drugs. These notices which appear in THE JOURNAL almost every week can be a definite guide to you in knowing what preparations are Council accepted . . . how they are best used . . . and how they can be most effective in your daily practice.

Insistence on Council accepted products is one reliable guide to clinically tested products.

This is one of a series of advertisements designed to explain the Councils' functions to you.

ACCEPTED — COUNCIL ON PHARMACY AND CHEMISTRY — AMERICAN MEDICAL ASSOCIATION

ACCEPTED — COUNCIL ON PHYSICAL MEDICINE AND REHABILITATION — AMERICAN MEDICAL ASSOCIATION

ACCEPTED — COUNCIL ON FOODS AND NUTRITION — AMERICAN MEDICAL ASSOCIATION

ACCEPTED — COMMITTEE ON COSMETICS — AMERICAN MEDICAL ASSOCIATION

INTERNATIONAL ACADEMY OF PROCTOLOGY

(Continued from Page 402)

of proctology. All physicians interested in proctology are therefore invited and welcomed to the annual meeting.

The program is available upon request to the Executive Offices of the International Academy of Proctology, 43-55 Kissena Blvd., Flushing, New York.

AMERICAN COLLEGE OF ALLERGISTS

The annual conclave of the American College of Allergists will be held this year at the Conrad Hilton Hotel in Chicago, April 24 to 29.

The first four days will be devoted to instruction under the tutelage of recognized authorities and the last three to a discussion and reporting of recent advances in the field of allergy by the investigators themselves. For detailed information write the American College of Allergists, La Salle Building, Minneapolis 2, Minnesota.

NATIONAL GASTROENTEROLOGICAL ASSOCIATION

The National Gastroenterological Association will give its Fifth Annual Course in Postgraduate Gastroenterology at the Hotel Biltmore, Los Angeles, October 15, 16, 17, 1953.

The course will again be under the direction of Dr. Owen H. Wagensteen, Professor of Surgery at the University of Minnesota Medical School, and Dr. I. Snapper, Director of Medical Education at the Cook County Hospital, Chicago. Distinguished faculty members from the medical schools in and around Los Angeles will provide the program.

Further information may be obtained from the National Gastroenterological Association, 1819 Broadway, New York 23, New York.

AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION

The Midwestern Section of the American Congress of Physical Medicine and Rehabilitation will hold its spring meeting at the Center for Continuation Study of the University of Minnesota from 9:30 a.m. to 5 p.m., Friday, May 1, 1953. Physicians are cordially invited to attend. Anyone wishing for further information may obtain it from the secretary, G. K. Stillwell, M.D., 2333 Priscilla St., Saint Paul 8, Minnesota.

INDUSTRIAL MICROBIOLOGY INSTITUTE

The sixth annual Industrial Microbiology Institute will be held at Purdue University, June 22-27, 1953. The program is designed for scientists in industrial plants and others interested in the identification of fungi and the problems of fungus control.

In addition to the usual lectures and laboratory sessions, which are scheduled daily during the mornings

Our Most Sincere Congratulations to all of the Physicians of Minnesota on the occasion of the 100th anniversary of the founding of the

Minnesota State Medical Association

Minnesota Physicians have made phenomenal progress in all branches of medicine, have ministered untiringly to the health and happiness of their fellow men, are appreciated and loved by all, have achieved fame and renown at home and abroad for their Society and their State.

Again we say Congratulations.

PENGELLY X-RAY COMPANY

Uninterrupted service to Physicians and Hospitals of the Northwest since 1914.

X-Ray—Cardiographs—Physical Medicine Equipment

Visit our display
of the
SANBORN
Viso Cardiette and Metabulator
St. Paul Auditorium

SALES
Phone
Sterling 14225

SERVICE
Phone
Sterling 14225

818 Nineteenth Avenue N E.
Minneapolis (18) Minnesota
Electronic Medical Equipment

and afternoons, a series of evening lectures will be given by outstanding specialists in the field of mycology, according to Dr. C. L. Porter, director of the institute.

These speakers include Dr. Virgil G. Lilly, professor of physiology at West Virginia, on "The Influence of Vitamins and Growth Factors on the Growth and Sporulation of Fungi"; Dr. William J. Robbins, director of the New York Botanical Garden, "Inhibition of Bacterial Viruses."

Dr. James G. Horsfall, director of the Connecticut Agricultural Experiment Station, "Fungicide Testing"; Dr. Radcliffe F. Robinson, assistant supervisor of biological research, Battelle Memorial Institute, "The Application of X-Ray Techniques to Industry"; and J. H. Richardson, Armour and Company, Chicago, "Mold Problems of the Food Industry."

The regular laboratory work will include the study of fungus classification, mucorales, ascomycetes, aspergilli, penicillia, actinomycetes, yeasts, and unknown fungi. Students will become sufficiently familiar with the terminology to read mycological literature.

Dr. John S. Karling, head of the department of biological sciences at Purdue, and other staff members will assist in directing the course.

BOARD OF EDUCATION EXAMINATION

Application forms for examination by the Board of Education of the city of New York for the position of School Chief Medical Director may be obtained from Dr. Jacob Greenberg, Associate Superintendent in Charge of Personnel, Room 510, 110 Livingston Street, Brooklyn 1, New York.

A fee of $10.00 is required upon scheduling of the tests. An applicant must be under the maximum age of fifty years, be graduated from an approved medical school or medical college and hold a license to practice medicine in the State of New York, and be certified as a diplomate of the American Board of Internal Medicine. Ten years' experience of approved and appropriate practice, nine months of which shall have been an internship in a hospital approved by the American Medical Association, is required; this experience must include or be supplemented by satisfactory administrative and supervisory experience over a period of two years. (In lieu of these requirements, a candidate may offer five years of experience as School Medical Inspector-Personnel in the public schools of the city of New York under regular license and appointment.

Questions regarding eligibility should be addressed to: Mr. Arthur Klein, Examiner-in-Charge, Board of Examiners, 110 Livingston Street, Brooklyn 1, New York.

FIRST INTERNATIONAL CONVENTION OF X-RAY TECHNICIANS

The First International Convention of X-Ray Technicians will be held in Toronto, Canada, at the Royal York Hotel, June 28 through July 2. The convention is sponsored jointly by The Canadian Society of Radiological

Technicians and The American Society of X-Ray Technicians.

Refresher courses will be offered for two hours each morning. The afternoon sessions will be devoted to joint sessions of the CSRT and ASXT, at which time technical papers and essays will be presented by technicians of both societies and by distinguished radiologists. Two Memorial Lectures will be given—Welch Memorial Lecture (Canadian) by E. A. Petrie, M.D., Director, Department of Radiology, St. Joseph's Hospital, St. John, New Brunswick, Canada; and the Jerman Memorial Lecture (American) by Russell H. Morgan, M.D., Professor of Radiology, The Johns Hopkins University, Baltimore, Maryland.

One need not be a member of either organization to attend. For further information, write Beatrice Hurley, R.T., Registrar, St. Catherine Hospital, East Chicago, Indiana.

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

The Central Association of Obstetricians and Gynecologists announces the election of the following officers:

President—W. O. Johnson, M.D., Louisville, Kentucky
President-Elect—Harold C. Mack, M.D., Detroit, Michigan
Vice President—Arthur B. Hunt, M.D., Rochester, Minnesota
Secretary-Treasurer—Harold L. Gainey, M.D., Kansas City, Mo.
Assistant Secretary—Woodard D. Beacham, M.D., New Orleans, La.

These officers will serve until the end of the annual meeting which will be held at the Shamrock Hotel, Houston, Texas, on November 5, 6, and 7, 1953.

The business office of the Central Association of Obstetricians and Gynecologists is located in Suite 602, 116 So. Michigan Avenue, Chicago 3, Illinois. The office of Dr. Harold D. Gainey, Secretary-Treasurer, is located at 4635 Wyandotte Street, Kansas City, Missouri.

MINNESOTA SOCIETY OF NEUROLOGY AND PSYCHIATRY

The regular meeting of the Society was held at the Town and Country Club in Saint Paul, Tuesday evening, March 10, 1953.

The scientific program was as follows: Speech and Hearing Problems in Child Psychiatry Practice

Louis L. Flynn, Jr., M.D.
(inaugural thesis)

The Effect of Iproniazid, a Derivative of Isonicotinic Acid Hydrazide, Upon the Behavior of Long-Term Mental Patients

Gordon R. Kamman, M.D,
John W. Freeman, M.D.
(by invitation)
Rubel J. Lucero, Ph.D.
(by invitation)

E. STARR JUDD LECTURE

The twentieth E. Starr Judd Lectureship will be given by Dr. Charles B. Huggins, Professor of Surgery, University of Chicago, Chicago, Illinois, Thursday evening, May 7, 1953, at 8:15 p.m. in the Amphitheater, Owre Hall (formerly Medical Sciences) sponsored by

MINNESOTA STATE MEDICAL ASSOCIATION

Welcome to Saint Paul.

For Your 1953 Convention

HOTEL *Saint Paul* HOTEL *Lowry*

the Medical School. Dr. Huggins' subject is "The Endocrinology of Mammary Cancer."

The late E. Starr Judd, an alumnus of the Medical School of the University of Minnesota, established this annual lectureship in Surgery a few years before his death.

MSMA COMMITTEE ON CONSERVATION OF HEARING

This announcement is made to inform physicians that the Committee on Conservation of Hearing is making a survey of Minnesota to determine the incidence of handicapping hearing loss among the residents of the State.

This survey is being made through school and country public health nurses and local health officers. Members of the committee have accepted assignments to conduct this survey as follows:

Dr. John Cameron—Crookston. Counties: Kittson, Roseau, Lake of the Woods, Marshall, Beltrami, Polk, Pennington, Red Lake, Clearwater, Norman, Mahnomen, Hubbard, Cass, Clay, Becker, Wadena, Crow Wing, Wilkin, Ottertail, Traverse, Grant, Douglas.

Dr. Anderson Hilding—Duluth. Counties: Koochiching, St. Louis, Lake, Cook, Itasca, Aitkin, Carlton, Pine, Kanabec.

Dr. Charles E. Connor—Saint Paul. Counties: Isanti, Chisago, Washington, Ramsey, Dakota.

Dr. Conrad J. Holmberg—Minneapolis. Counties: Wright, Anoka, Hennepin, Carver, Scott.

Dr. Joseph Gaida—Saint Cloud. Counties: Big Stone, Lac Qui Parle, Yellow Medicine, Chippewa, Swift, Stevens, Pope, Renville, Kandiyohi, Stearns, Todd, Morrison, Mille Lacs, Benton, Sherburne, Meeker, McLeod, Sibley.

Dr. J. Donald Sjoding—Mankato. Counties: Rock, Pipestone, Lincoln, Nobles, Murray, Lyon, Redwood, Cottonwood, Jackson, Martin, Watonwan, Brown, Nicollet, Blue Earth, Le Sueur.

Dr. Kinsey Simonton—Rochester. Counties: Rice, Goodhue, Wabasha, Waseca, Steele, Dodge, Olmsted, Winona, Faribault, Freeborn, Mower, Fillmore, Houston.

The Committee is preparing a pamphlet that will supply factual information regarding the status of such therapy as radium treatment, the fenestration operation, dental treatment designed to open the bite, et cetera. Statements will also be included regarding the role of the hearing aid and speech reading in the rehabilitation of those who cannot be helped by medical or surgical means. This information will be available without charge for those requesting it.

Lawrence R. Boies, M.D.
Chairman

CONTINUATION COURSES

The University of Minnesota will present a continuation course in *Radiology for General Physicians* May 21 to 23, 1953, under the direction of Dr. Leo G. Rigler, Professor and Head, Department of Radiology. Registrants for the course will spend most of their time in the University Hospital Department of Radiology reading films and carrying out procedures in association with

University of Minnesota

Nursing and College

A FASCINATING CAREER!

Students! The Nursing Programs of the University of Minnesota offer you a wonderful chance to combine a good college education with sound practical experience. For a professional or practical nursing career, for part-time nursing, and as excellent preparation for running a home and raising a family, you'll find nurses' training will be useful all your life.

Programs of the University of Minnesota School of Nursing

1. Professional Basic program prepares you for responsible positions in leading hospitals and other health agencies. B.S. degree awarded. 16 quarter program, start Pre-Nursing Courses any quarter. Admission to School of Nursing fall and spring quarters.

2. Advanced Programs prepare graduates to be clinical specialists, teachers, administrators.

3. Practical Nursing Programs qualify you for practical nursing positions in 4 to 6 quarters. You'll want to investigate the possibilities of these programs fully.

Write for further information to Miss Katharine J. Densford, Director, University School of Nursing, Minneapolis 14, Minnesota.

University of Minnesota School of Nursing

members of the faculty of that department. A minimum of didactic material will be presented. Because of the nature of this course, registration will be strictly limited. Early application is therefore suggested. Accommodations will be available in the Center for Continuation Study as usual.

* * *

Electrocardiography will be the subject of a continuation course for general physicians which will be presented by the University of Minnesota next June 8 to 12. Emphasis will be placed on practical experience in the interpretation of electrocardiograms. Each registrant will have an opportunity to read approximately 200 tracings under the supervision of the teaching staff. Separate sessions are being planned for those who consider themselves "beginners" in electrocardiography. The faculty for the course will consist of members of the staff of University of Minnesota Medical School and the Mayo Foundation.

POSTGRADUATE CANCER AND HEART DISEASE SEMINARS

Two postgraduate seminars on cancer and heart disease are scheduled for the physicians in the western part of Minnesota this spring. One seminar will be held in Marshall on March 31. Seven Tuesday evening sessions extending through May 12, are alternately scheduled for the Minnesota Cafe and the New Atlantic Hotel, in Marshall.

In Morris, the site of the second seminar, six sessions will be held in the Stevens County Hospital beginning April 8.

All physicians in these areas are invited to attend. The meetings will be interesting and profitable. There is no fee for the series of lectures.

Both Marshall and Morris seminars are sponsored by the Minnesota Department of Health, Minnesota Medical Association, University of Minnesota, Minnesota Cancer Society and the Minnesota Heart Association in conjunction with the Lyon and Lincoln County Medical Society and the West Central Minnesota Medical Society, respectively.

FAMILY DOCTORS' DAYS

The first in a series of *Family Doctors' Days* will be presented at the University of Minnesota Hospitals, April 29. The members of the Medical School faculty are eager to have as many physicians as possible attend this program for they look forward to the opportunity of exchanging ideas and problems.

The April 29 program will be a very informal one presented by the Department of Medicine and will feature the following:

12:00 noon Luncheon with Department of Medicine staff
2:00 p.m. Antibiotics in Medical Practice W. W. Spink
3:00 p.m. Ward Rounds.....C. J. Watson
4:30 p.m. Clinical-Pathological Conference C. J. Watson and staff

All physicians are invited to attend.

NOW AVAILABLE to the MINNESOTA PHYSICIAN and His Cardiac Patients

FOUR NEW PUBLICATIONS

"These brochures are simply and clearly written. 'Food For Your Heart' is excellent and has workable recipes. 'Heart Disease and Pregnancy' is for the patient and easy to follow. I especially recommend 'Diagnosis of Congenital Cardiac Defects in General Practice'."—C. N. HENSEL, M.D., *Secretary, Minnesota Heart Association.*

Send requests to:

MINNESOTA HEART ASSOCIATION, INC., 532 Endicott-on-4th, St. Paul 1, Minn.

Minnesota Doctors!

The Patterson Surgical Supply Company welcomes you to Saint Paul and the One Hundredth Anniversary Session of the Minnesota State Medical Association.

Our store is conveniently located at 130 West Seventh Street, one-half block from the Saint Paul Auditorium. We hope you will make it your headquarters during the meeting.

Patterson Surgical Supply Company
130 West Seventh Street
Saint Paul, Minnesota
Tel. Cedar 1781

STEELE COUNTY MEDICAL SOCIETY

At the annual meeting of the Steele County Medical Society, Dr. R. J. Wilkowske was elected president; Dr. J. A. McIntyre, vice president, and Dr. J. F. Schaefer, secretary-treasurer. Dr. E. Q. Ertel, Ellendale; Dr. C. T. McEnaney and A. J. Olson, of Owatonna, were named censors. Dr. C. Lundquist, of Owatonna, was elected delegate to the annual convention of the Minnesota State Medical Association, with Dr. T. W. Stransky, of Owatonna, as alternate.

"YOUR DOCTOR" FILM

In 1952 more than 20 million theater goers in the United States and Canada saw a movie entitled "Your Doctor," which was produced by Louis de Rochemont with the assistance of the AMA. This film is valuable as a Public Relations activity to be sponsored by county or state medical associations. Society PR committees or Medical Auxiliaries may purchase the film and loan it to local groups or commercial theaters, or they may obtain the film from Modern Talking Picture Service, Inc., at the nearest distribution center by paying postage and insurance charges only. The nearest distributor in Minnesota is Mr. A. C. Holmgren, Elliott Film Company, 1110 Nicollet Avenue, Minneapolis.

PR committees of medical societies can contact local movie houses and use all facilities of the society to build an audience. Promotional aids in publicizing the movie may be obtained from the AMA.

Complete Laboratories in Minneapolis and Principal Cities of Upper Midwest

EXECUTIVE OFFICES
MINNEAPOLIS, MINN.

SINCE 1913

Benson
OPTICAL COMPANY

Woman's Auxiliary

PLANS COMPLETE FOR 31ST ANNUAL MEETING

Mrs. C. L. Sheedy, President

The Woman's Auxiliary to the Minnesota State Medical Association will hold its thirty-first annual meeting on May 18, 19 and 20, in conjunction with the 100th Anniversary meeting of the Minnesota State Medical Association on those dates in Saint Paul, where an interesting program is planned.

The meeting will begin with registration at 9:00 a.m. each morning. Auxiliary headquarters will be the Hotel Lowry.

The Executive Board meeting will begin at 10:30 a.m., Monday, May 18, at the Minnesota Club, with a luncheon following at 12:30 p.m. The annual tea, held in honor of state officers, will begin at 3:30 p.m. at the International Institute, where refreshments of many national origins will be served.

The annual business meeting, open to all members of the Auxiliary, is scheduled for 10:00 a.m., Tuesday, May 19, and will take place in the Fiesta room of the Hotel Lowry. The annual luncheon for all members is to be held at 1:00 p.m. in the Terrace, Hotel Lowry. Dr. Gordon R. Kamman, Associate Professor of Nervous and Mental Diseases, University of Minnesota, and Deputy Commissioner of Mental Health for the State of Minnesota, will speak on "Minnesota's Mental Health Program." Installation of officers and presentation of the new Auxiliary president, will follow. All board members will attend the post-convention board meeting following this meeting.

The annual breakfast for all Auxiliary members will be held on Wednesday morning, May 20.

Your president would like to take this opportunity to urge you to make plans now to attend this important Auxiliary meeting. It offers a chance to become better acquainted with Auxiliary procedures and gives doctors' wives from throughout the state a chance to take part in all vital discussions and decisions made at the convention. Please remember the dates May 18, 19 and 20. Your program will be sent you in advance of the meeting and will include a reservation card so you may make arrangements for attending events at the thirty-first annual convention.

FREEBORN AUXILIARY AIDS CIVIL DEFENSE

Members of the Freeborn County Medical Auxiliary are devoting time to training and aid in the civilian defense program. Many members are taking the home nursing course offered by the Civil Defense department. Mrs. R. F. Schmidt, an Auxiliary member, will teach this home nursing training course.

This action was taken at the February meeting of the auxiliary. Members met at the home of Dr. J. P. Person, and were shown two civil defense films by Judge Norris Peterson. The films dealt with biological warfare and atomic attack.

Other activities of the Freeborn auxiliary include cooperation in the Red Cross blood program, aiding in the hospital shop and interesting girls in the student nurse program.

Distributors to the profession

of fine

Injectable Vitamins and Endocrines

Interstate Pharmacal Company

P.O. Box 252 Beloit, Wis.

MAIL ORDERS SHIPPED IMMEDIATELY

The Birches Sanitarium, Inc.

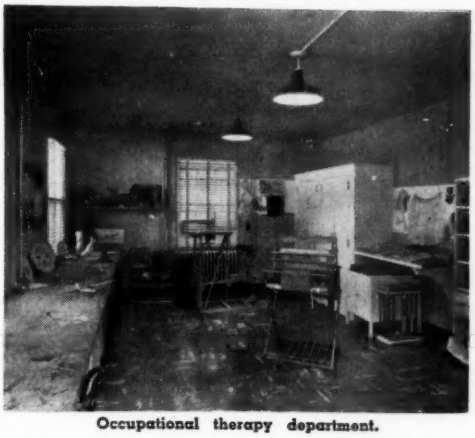
2391 Woodland Avenue
Duluth 3, Minnesota

A hospital for the care and treatment of Nervous and Mental disorders. Quiet, cheerful environment. Specially trained personnel. Recreational and occupational therapy.

Dr. L. R. Gowan, M.D., M.S., Medical Director

Crestview Hospital
SAINT PAUL

A non-profit organization



Occupational therapy department.

CRESTVIEW
NEUROPSYCHIATRIC HOSPITAL

145 W. College Ave. . . . GArfield 5841
SAINT PAUL, MINNESOTA

Highest standard of service and facilities for over 15 years.

The only non-profit specialized hospital in St. Paul devoted exclusively to the treatment and care of neuropsychiatric patients.

Ultra modern facilities and comforts at the lowest cost to patients.

- **Occupational therapy and recreational department.**
- **Complete X-ray- and- laboratory.**
- **Electrocardiography — basal metabolism.**
- **Electroencephalography available.**
- **All patients rooms air-conditioned.**
- **Background music and psychotherapy sound equipment.**
- **Medically staffed by every neurologist and psychiatrist in St. Paul.**
- **Especially trained nursing staff.**

MEMBER of the American Hospital Association

MEMBER of the Minnesota Hospital Association

APPROVED by the Minnesota State Medical Association and the Ramsey County Medical Society.

Send for photo brochure and rate schedule.

SPECIAL . . .

ONLY $9.95

Entirely chrome plated
WASTE RECEPTACLES with
porcelain enamel removable
inner pail, 12 quart size.

C. F. ANDERSON CO., Inc.

Phone: ATlantic 6508

901 Marquette Avenue **Minneapolis, Minn.**

In Memoriam

WILLIAM ALBERTUS COVENTRY
1876-1953

On February 8, 1953, in Duluth, death took from our roster, a man of unusual devotion to our guild. It is impossible to do justice to his attainment within the limits of this record. W. A. Coventry came to Duluth just at the turn of the century. For over fifty years he was recognized as a standard bearer of all that is best in medicine in that challenging period. The great era of machines and mass production economy was on the way, not to mention two overwhelming world wars that put our social and economic structure to every possible test. It was to witness the gifts of science to medicine, marvelously increasing the range of the doctor's services, the while his personal prestige as a miracle man lessened because, as a patient recovering from pneumonia could say, "It was the penicillin that turned the trick."

A review of W. A. Coventry's life shows to what an unusual extent he was able to become a part of the leadership so important to our administrative and scientific departments and societies. In his long life, he illustrated the necessary adaptation of the profession to a great increase in medical specialties; to the expansion of our hospitals and the proportion of medical work done in offices and clinics. Social and economic trends, with the great depression of the early thirties, led to a great extension in medical relief. W. A. Coventry gave much time and thought to plans for meeting this exigency. The difficulties involved were such that much that had to be done could not be done by mass action, as for instance, in the prevention and treatment of acute transitory disorders. The profession of medicine had to accommodate to handling chronic disorders and disabilities with the aging factor ever in the ascendency.

It was this background that brought out in W. A. Coventry his great usefulness to our profession, through his unlimited fund of energy and judicious guidance. He was also willing to enter with avidity into the work of many non-medical groups and associations, that developed confidence in doctors as citizens and leaders, without which public health efforts would have been long delayed. He had also good business judgment and served on the directorate of The Northern National Bank in Duluth for many years, as well as on several other business enterprises. It is fitting to review briefly a few of the sequences and attainments in the life of W. A. Coventry that portray the sources of his type of leadership that invites emulation.

William Coventry was born in Brainerd, September 17, 1876. His father was a Northern Pacific Railroad engineer. The family later transferred to Duluth where William finished high school and made his future educational goal the University of Michigan, from which he graduated in Medicine in 1900. For one year he interned under the late well-known Walter Courtney, Chief Surgeon of the Northern Pacific Railway, at Brainerd. After a year, he joined another Michigan graduate, the late Dr. A. J. Braden, in a general and railroad practice in the Duluth West End. Doctor Braden was a meticulous surgeon, never sparing himself, and was responsible for some of the earliest and best development of hospitals in Duluth. His young associate found the elder man a tough taskmaster, but he was taught how to work, and to use his time and faculties most effectively. For example, he was introduced to a very heavy obstetrical practice in that rapidly growing and expanding portion of Duluth. In the course of his professional life, it was estimated that he brought into the world over 5200 babies! This early experience laid the foundation for his ultimate specialization in Obstetrics and Gynecology. To prepare for this, he spent part of 1910 and 1911 in graduate study in Vienna and Dublin. In later years, he made frequent visits to the various lying-in hospitals in our own country. At one time, he became quite familiar and skilled in the techniques of the famous Doctor Potter, of Buffalo, New York, who popularized his own method of obstetrical version. This limited field of Obstetrics and Gynecology was never sufficient, however, to demand all of Doctor Coventry's time or talents. He was very active in the early development of the American College of Surgeons; and in 1940 was a member of the Board of Governors.

Doctor Coventry made the expansion and development of Duluth's two major hospitals, St. Mary's and St. Luke's, one of his favorite labors. In 1951, he received from St. Mary's Hospital an illuminated scroll, commemorating this well-earned recognition for his teaching, his interest in staff meetings, pathological conferences and everything that pertained to wholesome staff organization. He served both hospitals, on occasion, as Chief of Staff. It was inevitable that anyone with his dynamic personality and willingness to serve should have fastened upon him such offices and appointments as the presidency of the St. Louis County Medical Society and then of the Minnesota State Medical Association. He also served as an active member of the Council of the State Medical Association and for one year was its chairman. He allocated much time to assisting in the organization and directing of the work of the Blue Cross, and later the Blue Shield. As to attending his official committee duties, he was no attendant by proxy. He seemed tireless in terms of travel. In that respect he shared the enthusiasm of such men as the late W. L. Burnap, of Fergus Falls, and of Bert Adams, still active in Hibbing, Minnesota. Between these men and a few others of their type, the naturally segregated northern portion of Minnesota was able to keep its medical needs adequately represented in the medical councils of the state.

Doctor Coventry extended his public service in civic affairs to many organizations, including the Duluth

North Shore Health Resort

Winnetka, Illinois

on the Shores of Lake Michigan

A completely equipped sanitarium for the care of nervous and mental disorders, alcoholism and drug addiction offering all forms of treatment, including electric shock.

SAMUEL LIEBMAN, M.S., M.D.

225 Sheridan Road **Medical Director** **Phone Winnetka 6-0211**

Chamber of Commerce, the Duluth Kiwanis Club, the Arrowhead Association and the Masonic Order. In all of these, he had official recognition. The 1949 Duluth Hall of Fame Award was given him with particular attention drawn to his medical guidance of The St. Louis County Welfare Board in the crucial period following the depression of the early thirties.

Doctor Coventry saw every advantage in working together with his fellow practitioners to make his home area a safe place in which to be sick. That was the keynote of his interest in the societies in which he had membership and in their various local and national meetings. He took his membership seriously. He was the best of listeners and aimed to miss nothing of tangible value. Staff conferences were never a drudgery, whether he was on the program or not. He enjoyed his position as one of the Minnesota delegates to the AMA, and his advice was often sought. He fell naturally into the spirit of co-operative enterprize, which led him to join with some others, as a founder of the association known as the Duluth Clinic in 1916. It was not easy for him either to write for publication or to speak extemporaneously. Therefore, much that he gave to the various organizations mentioned in the way of public service was worked out the hard way. It came entirely out of his brave and earnest heart and from his total integrity and honesty.

Doctor Coventry's first wife, the mother of his four children, fell a victim to influenza in 1918. He is survived by his present wife, Anna S., two sons and two daughters. Both sons are in the field of medicine: Dr. William D., an internist of Duluth, and Dr. Markham in Orthopedics at the Mayo Clinic, Rochester, Minnesota. The daughters, Mrs. John M. Harlow and Mrs. Frederick Norton, live in Tucson, Arizona, and El Paso, Texas, respectively. He is also survived by two sisters and a brother.

His life was characterized by tolerance. It has been said that it is well that but few men become leaders, because the attainment breeds aggressiveness, and with it, distasteful intolerance.

E.L.T.

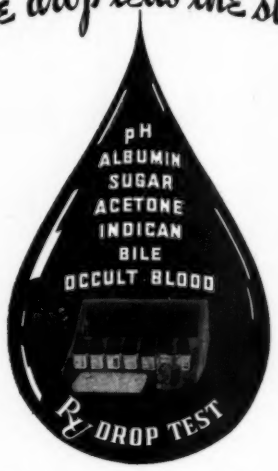
FRANK P. FRISCH

Dr. Frank P. Frisch of Willmar, Minnesota, died March 8, 1953, of a heart attack.

Dr. Frisch was born in St. James, Minnesota, on April 27, 1884. He obtained his medical degree from the University of Minnesota in 1914 and interned at the University Hospital in Minneapolis.

He practiced at Kimball, Minnesota, from 1915 to 1917 and at Gibbon, Minnesota, from 1919 to 1923. In 1924, he took postgraduate work at the New York Postgraduate School. From 1925 to 1928, he practiced at Bismarck, North Dakota. From there he moved to Willmar.

Dr. Frisch was a member of the Minnesota Academy of Otolaryngology and Ophthalmology and of the American College of Surgeons. He was a member of



by simply adding ONE drop of urine to ONE drop of reagent, Ru Drop Test offers a clinically accurate method . . . Unconditionally Guaranteed . . . for the complete chemical screening of all urines by One Uniform Procedure in ONE MINUTE. A comprehensive brochure on One Minute Ru Test is available at your request

ORGO PRODUCTS COMPANY
WALTERIA, CALIFORNIA

Cook County Graduate School of Medicine

POSTGRADUATE COURSES—1953

SURGERY—Intensive Course in Surgical Technic, two weeks, starting April 13, April 27, May 11.
Surgical Technic, Surgical Anatomy and Clinical Surgery, four weeks, starting June 1.
Surgical Anatomy and Clinical Surgery, two weeks, starting June 15, August 17.
Gallbladder Surgery, ten hours, starting April 20.
Surgery of Colon and Rectum, one week, starting April 13.
General Surgery, one week starting May 4.
General Surgery, two weeks, starting April 20.
Thoracic Surgery, one week, starting June 8.
Breast and Thyroid Surgery, one week, starting June 22.
Esophageal Surgery, one week, starting June 22.
Fractures and Traumatic Surgery, two weeks, starting June 15.
GYNECOLOGY—Intensive Course, two weeks, starting April 20.
Vaginal Approach to Pelvic Surgery, one week, starting May 4.
OBSTETRICS—Intensive Course, two weeks, starting June 8.
PEDIATRICS—Congenital Heart Disease, two weeks, starting May 18.
Cerebral Palsy, two weeks, starting June 15.
MEDICINE—Intensive General Course, two weeks, starting May 4.
Electrocardiography and Heart Disease, two weeks, starting July 13.
Allergy, one month and six months, by appointment.
CYSTOSCOPY—Ten-day Practical Course starting every two weeks.
DERMATOLOGY—Intensive Course, two weeks, starting May 11.

TEACHING FACULTY—ATTENDING STAFF OF COOK COUNTY HOSPITAL

ADDRESS: REGISTRAR, 707 South Wood Street, Chicago 12, Illinois

the Kandyohi-Swift-Meeker County Medical Society and of the Minnesota State Medical Association and the American Medical Association.

SEVERIN HERMAN KOOP

Dr. Severin H. Koop of Richmond, Minnesota, died on February 5, 1953, at the University Hospital in Minneapolis.

Dr. Koop was born at Brainerd, June 24, 1898. He received his medical degree from the University of Minnesota in 1926 and interned at St. Mary's Hospital, Minneapolis, and in the hospital of the same name, Duluth, after which he became superintendent of the Richmond Hospital.

In 1927, Dr. Koop was married to Helen Beatrice Sehl. His widow and six children survive him.

Dr. Koop was a member of the Stearns-Benton County Medical Society, the Minnesota State Medical Association, the American Medical Association, the Midwest Hospital Association, and the American Academy of General Practice.

JOHN SILLIMAN MACHIE

Dr. John D. Gilbert of Carlton, Minnesota, died January 20, 1953, at the age of eighty-eight.

Dr. Gilbert was born July 5, 1864, in Stratford, Connecticut. He obtained his M.D. degree from the College of Physicians and Surgeons in Chicago in 1890 and moved to Carlton from Fond du Lac, Wisconsin, in 1909.

Dr. Gilbert practiced at Carlton until 1942 but continued to be the village health officer until 1949. He had been residing at the home of Mr. and Mrs. Roy Nordstrom since 1946.

RUSSELL JAMES MOE

Dr. Russell J. Moe, of Duluth, died on March 8, 1953, following a long illness.

Dr. Moe was born at St. James, Minnesota, April 21, 1902. He studied medicine at the University of Minnesota where he graduated in 1928. After interning at St. Luke's Hospital, Duluth, he took postgraduate work at the New York Lying-In Hospital and at the Washington University Medical School at St. Louis.

Dr. Moe was a member of the St. Louis County Medical Society, the Minnesota State Medical Association and the American Medical Association. He was also a member of the Interurban Academy of Medicine, the Minnesota Society of Obstetrics and Gynecology, the Central Association of Obstetrics and Gynecology and the Minnesota Surgical Society, of which he was a past president.

Dr. Moe is survived by his wife, Virginia Palmer Moe, three sons and a daughter.

EDWARD MOREN

Dr. Edward Moren of Duluth, Minnesota, who formerly practiced surgery in Minneapolis, died February 27, 1953, at the age of seventy-seven.

Dr. Moren was born at Anoka, Minnesota, June 18, 1876. He graduated from the University of Minnesota Medical School in 1906 and interned at the Minneapolis

VALLEYVIEW

Hospital and Sanitarium

Jordan, Minnesota

PHONE 254

Located conveniently 22 miles southwest of Edina near paved state highway 169.

Offers unique advantages for the longer term care of nonacute illnesses including geriatric disorders.

Twin Cities Phone
Bridgeport 2119

General Hospital. He took postgraduate work in surgery in Vienna from August, 1912 to August, 1913 and was Clinical Assistant Professor of Surgery at the University of Minnesota and Assistant Chief Surgeon at Minneapolis General Hospital. At one time he served as Chief of Staff at the Swedish Hospital in Minneapolis.

Dr. Moren was a member of the Hennepin County Medical Society, the Minnesota State Medical Association, and the American Medical Association. He was also a fellow of the American College of Surgeons. He is survived by four daughters: Mrs. W. F. Johnson, Duluth; Mrs. Willard Stout, Los Angeles; Mrs. John Rothermel, Great Falls, Montana, and Mrs. George Fahlstrom, Buffalo, New York.

WALTER EARL RICHARDSON

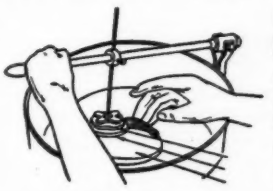
Dr. W. E. Richardson died in Saint Paul, February 7, 1953. He had made Saint Paul his home for several years after practicing medicine in Minnesota and South Dakota for more than fifty years.

Dr. Richardson was born in Elgin, Minnesota, July 15, 1872. He graduated from Rush Medical College in 1896. He practiced for two years under Dr. G. J. Moe at Heron Lake, Minnesota. He practiced at Slayton, Minnesota, for twenty-one years until 1919 and, in 1913, founded the Murray County Hospital in that city. He practiced at Pipestone, Minnesota, from 1919 until December 1, 1931, and during that period was Commander of the American Legion Post of Pipestone. He then practiced at Philip, South Dakota, where he remained for six years. He retired in Rushford, Minnesota, in 1946 after practicing there eight years. During World War I, he was attached to Base Hospital 99 in the A.E.F.

Dr. Richardson was a one-time member of the Olmsted-Houston-Fillmore-Dodge County Society, the Minnesota State Medical Association and the American Medical Association.

Dr. Richardson is survived by his wife, Fatima; a daughter, Mrs. F. C. Eustis of Saint Paul; three sons, Walter W., Superintendent of Schools in North Saint Paul; William H. of Jasper, Minnesota, and Dr. Robert J. of Saint Paul.

UNUSUAL LENS GRINDING



CATARACT, MYO-THIN

and other difficult and complicated lenses are ground to extreme thinness and accuracy by our expert workmen.

ARTHUR F. WILLIAMS

SAINT PAUL MINNESOTA

Of General Interest

Dr. Wesley W. Spink of the University of Minnesota Medical School delivered the Twenty-ninth Annual James Anders Lecture before the College of Physicians of Philadelphia, April 1.

* * *

Dr. E. A. Boyden, Professor of Anatomy at the University of Minnesota, addressed the opening session of the two-day course in Pathologic Physiology of the Lung, held in St. Louis, March 31, in conjunction with the annual meeting of the American Association of Pathologists and Bacteriologists.

* * *

Dr. Reynold A. Jensen, Professor of Pediatrics at the University of Minnesota, recently participated in a Postgraduate Assembly in Omaha, speaking on the subject, "The General Principles of Child Psychology." He also served in a panel discussion on child behavior.

* * *

Dr. N. M. Mensheha, a native of Ukraine, now an American citizen and a practicing physician in Forest Lake, spoke at the Forest Lake Township Farm Bureau monthly meeting, March 3. Dr. Mensheha described life in a a communist state.

* * *

Dr. Howard L. Horns, assistant dean of the University of Minnesota Medical School, was recalled to active duty with the Army Medical Corps, March 17. **Dr. William F. Maloney,** medical fellow, is serving as acting assistant dean during Dr. Horn's leave of absence.

Dr. Horns is the second member of the medical school staff to be activated since January 1. **Dr. Richard M. Magraw,** assistant professor of psychiatry and medicine, was recalled to active service in January.

* * *

Dr. John B. Sanford, recently returned from army medical service in Korea, spoke on conditions in Korea to the members of the St. Louis County Medical Society at the regular meeting, held March 12, at St. Mary's Hospital, Duluth.

* * *

Mrs. Roy Good, mother of the three Drs. Good—**Dr. Roy H., Dr. Thomas A.,** and **Dr. Robert A.,** all of Minneapolis—was chosen Mother of the Year for Minnesota. Mrs. Good, a Minneapolis elementary school teacher, was widowed twenty-nine years ago. Besides her three sons in the medical profession, another son, Charles, is working for his Ph.D. in psychology at the University of Minnesota.

* * *

Dr. J. F. DuBois was named Sauk Centre's "Citizen of the Year" March 10. He was awarded a plaque by the Sauk Centre Chamber of Commerce and his photograph will be hung in a special gallery in the city hall. Dr. DuBois is secretary of the State Board of Medical Examiners; in 1948 he was president of the National Federation of Medical Licensure, and in 1950 became the first Minnesotan named to the National Board of Medical Examiners. Dr. DuBois has always been active in local civic affairs until last year when he suffered a stroke and has been in retirement from his medical practice..

* * *

Dr. H. Herman Young, Mayo Clinic surgeon, showed colored slides of accident victims who have been treated at the Mayo Clinic, at a Farm and Home Safety Institute held at the Albert Lea High School, March 19.

* * *

Dr. J. M. Gacusana, recently from Hot Springs, South Dakota, opened a practice in Mahnomen, March 6.

* * *

Two former Saint Paul doctors—**Dr. Paul B. Magnuson,** secretary of the American College of Surgeons and former chief medical director of the Veterans Administration, and **Dr. Dean A. Clark,** general director of Massachusetts General Hospital—took part in a two-day forum at the annual meeting of the National Health Council, held in New York City, March 19 and 20.

* * *

Dr. M. H. Larson, who has been operating the hospital in Nicollet, began practice in Lake Benton in the new clinic there, April 1.

* * *

Dr. Bernard Street and **Dr. A. M. Nielsen,** of Northfield, broadcast over local station, KDHL, February 13 and 17, emphasizing the need for blood donors contributing during the visit of the Red Cross mobile blood bank unit.

* * *

Dr. M. H. Bauer, of Winthrop, was re-elected chairman of the Sibley County Nursing Advisory Board at the annual meeting held February 3 in the courthouse.

* * *

Dr. Traugott J. Bloedel, of the Osseo Clinic, assisted with the immunization program in the public and parochial schools at Dayton, February 5.

* * *

Dr. Frederic Kottke, of the University of Minnesota Hospitals, was guest speaker at the annual meeting of the Isanti County Public Health Nursing Service, held February 11, in the Lutheran Church at Braham. Dr. Kottke presented a lecture on rehabilitation of patients sufferisg from crippling diseases such as arthritis, polio and spastic palsey. **Dr. S. G. Johnson,** of Isanti, presided over the meeting.

* * *

Dr. William C. Bernstein, clinical professor of surgery at the University of Minnesota Medical

A COMPELLING ARGUMENT

for the purchase of

MUNICIPAL BONDS NOW

Municipal Bonds are now paying the highest rate of interest since 1940.

IF YOU PAY TAXES ON	and	YOU BUY A MUNICIPAL BOND THAT PAYS	it is	EQUIVALENT TO TAXABLE INCOME THAT PAYS*
$ 6,000-$ 8,000		3.50%		5.30%
10,000- 12,000		3.50%		6.00%
14,000- 16,000		3.50%		7.45%
18,000- 20,000		3.50%		8.50%

*Under current Federal Income Tax rates and provisions.

We are now offering Municipal Bonds that pay you from 3% to 4%. There has never been a Federal Income Tax on income received from Municipal Bonds.

CAN YOU AFFORD TO BE WITHOUT MUNICIPAL BONDS?

JURAN & MOODY

MUNICIPAL SECURITIES EXCLUSIVELY

TELEPHONES:
GArfield 9661
Prior 6423

93 E. SIXTH STREET
ST. PAUL 1, MINNESOTA

School, and **Dr. Reynold Jensen,** University of Minnesota, child psychiatrist, were the guest speakers at the last two seminar meetings of the Blue Earth Valley Medical Association. Dr. Bernstein, speaking at the February 12 meeting, dealt with the topic of cancer of the rectum and colon. Dr. Jensen, who spoke at the February 27 meeting, spoke on "The Psychiatric Aspects of Growing Children."

* * *

Dr. Orianna McDaniel, a woman pioneer in the medical field, has behind her fifty years of service with the Minnesota State Health Department. Dr. McDaniel earned her medical degree at the University of Michigan and came to Minneapolis in 1894 to intern at Northwestern Hospital, one of the few hospitals in the country that would accept a woman doctor in those days. Two years later she joined the Health Department. In 1907 Dr. McDaniel organized and headed the department's Pasteur Institute but by 1921 a new process for the treatment of rabies was developed so that local doctors could care for rabies patients, and the institute was abandoned. During World War I, Dr. McDaniel became acting director of the state's Division of Preventable Diseases, while Dr. A. J. Chesley, director, was in military service. She remained as head of the division under Dr. Chesley, until her retirement at the age of seventy-three years.

RECENT DENTAL LITERATURE ADVOCATES BAN ON THUMB SUCKING AND NAIL BITING

Cast from a children's dental clinic showing malocclusion due to thumb sucking

Authorities show developmental defects in dental occlusion when vicious habits are not treated. Children and adults alike are subject to these injurious mouth habits.

Nagging and rebuke are psychologically unsound and serve only to focus attention on the habit. For efficient treatment on a reflex basis, prescribe

Order from your pharmacist

Contains: Oleo Resin Capsicum, Aloe, Benzoin, Storax, Tolu Balsam, Soluble Pyroxylin and Alcohol 4.75%

BAN

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

Professional samples available. WRITE TO:

PUREPAC CORPORATION
511 East 72nd Street • New York 21

AT YOUR CONVENIENCE, DOCTOR . . .

you are cordially invited to visit our new and modern prescription pharmacy located on the street floor of the Foshay Tower, 100 South Ninth Street.

With our expanded facilities we will be able to increase and extend the service we have been privileged to perform for the medical profession over the past years.

Exclusive Prescription Pharmacy

Biologicals Pharmaceuticals Dressings
Surgical Instruments Rubber Sundries

JOSEPH E. DAHL CO.
(Two Locations)
100 South Ninth Street, LaSalle Medical Bldg.
ATlantic 5445 Minneapolis

Dr. George Penn, of Mankato, was guest speaker at the February meeting of the Women's Auxiliary of Immanuel Hospital. Dr. Penn talked on, "Obstetrics and the New Hospital," showing drawings of the plans for the new obstetrics wing which is soon to be completed.

* * *

Dr. H. L. Smith, retired after twenty-seven years in the cardiology department of the Mayo Clinic, entered the printing and publishing business by purchasing the *Mantorville Express,* a weekly almost as old as Minnesota itself, recently. Dr. James Eckman, (Ph.D) associated with the publications department of the clinic, has been unofficially designated the technical adviser.

Switching from medicine to print and make-up for Dr. Smith is just a fulfillment of his hobby. During his years at the clinic, Dr. Smith spent many hours of spare time working in his basement print shop at a hobby that took him away from his work. He often collaborated with Dr. Eckman on printing projects. Dr. Eckman has made a hobby of type collecting as well as printing. He now owns some 300 cases of various type faces from many parts of the world. Some of his type dates back to 1690.

The *Mantorville Express* was founded in 1857 by John E. Bancroft who carted his outfit across the plains by ox team. The fortunes of the paper have paralleled those of the Dodge County seat which it served. As the town gradually lost its place, the paper dwindled in importance, circulation and income. However, the town people would not let their paper die entirely and up to November, 1952, it was operated as a co-operative project, being leased to various printers to operate. L. W. Jensen, who was currently leasing the paper, will continue as editor under the new publisher, Dr. Smith.

* * *

Dr. Earl Bigler was elected president of the Perham Chamber of Commerce recently. Dr. Bigler has been in practice in Perham since April 1, 1947 when he joined his brother, **Dr. Ivan Bigler,** there in his medical practice.

* * *

Dr. Jack Friedman of Mount Sinai Hospital, Minneapolis, was the guest speaker at a meeting of the Stearns-Benton Medical Society, February 19.

* * *

Dr. T. P. Mollers, of Soudan, was elected secretary of the Range Medical Society at a recent meeting of the staff. **Dr. Paul Reed** of Virginia, is president of the group which is composed of members from Duluth and Range communities.

* * *

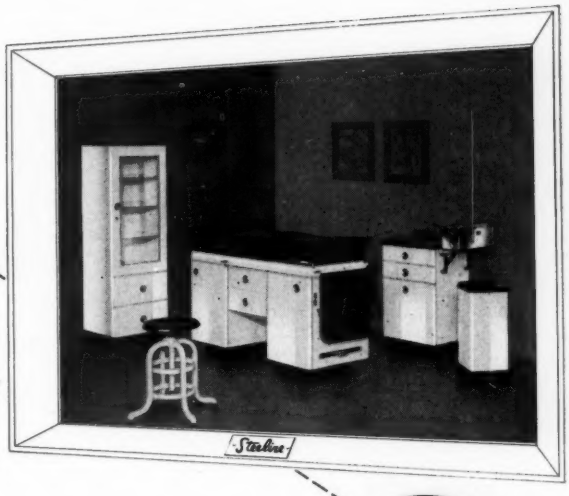
Dr. John P. Dahlstet, Mankato, has been recalled to active duty with the Navy. He left for assignment at the Marine corps air station at Miami, Florida, February 24.

* * *

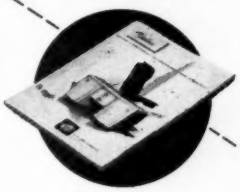
Dr. F. W. Behmler, of Morris, has been appointed Stevens County United States Defense Bond chair-

design achievement in treatment room furniture

New Steeline has gone through fifteen years of gradual development to reach the fine degree of design perfection it now has. The suggestions of scores of physicians and the engineering skill of our own production plant have been combined to produce this outstanding treatment room equipment. New features such as foam rubber cushioned contour top, magnetic door latches, concealed paper sheeting holder, superb color finishes, etc., are all fully described and illustrated in our new full-color brochure—send for yours today.



FREE . . . 16-page full-color brochure complete with specifications — send for your copy today.



A. S. ALOE COMPANY OF MINNESOTA • 927 Portland Avenue • Minneapolis 4, Minnesota

man. As chairmán, Dr. Behmler will co-ordinate efforts to meet the 1953 Stevens County goal of $360,000.

* * *

Dr. C. H. Coombs, of Cass Lake, moved into his new six-room medical building recently.

* * *

Dr. Walter Wells, of Jackson, president of the Southwestern Minnesota Medical Society, was injured in a car-truck collision, February 22, while he was making a sick call. Dr. Wells suffered a fractured pelvis. His car was demolished.

* * *

Dr. Owen Wangensteen, University of Minnesota Medical School professor, and member of the national and state boards of the American Cancer Society, attended a meeting of the American Cancer Society in Chicago, February 21, accompanied by three of his patients. The patients—Mrs. Catherine McKee, of Bemidji, Elias Lindeberg, of Minneapolis, and Mrs. Carrie Lang, of Saint Paul, appeared at the meeting to demonstrate medical advances made in recent years in cancer research.

* * *

Dr. McLemore Bouchelle, East Range Clinic of Virginia, spoke on "The Attitude of the Patient and his Family toward Cancer," to the Gillett Club of Eveleth, February 16.

Dr. Inge Eleanore Mook, Minneapolis, was a guest speaker at a general meeting of the American Association of University Women, held at Duluth, February 24. Dr. Mook is the recipient of the AAUW, Duluth branch international study grant for 1951-1952. Her topic was "Circle the World with Friendship." Dr. Mook received her medical degree in 1950 from the University of Goettingen in Germany and completed her internship in that country. She is now specializing in heart disease and diseases of the circulation of the blood at the Heart Hospital of the University of Minnesota Hospitals, Minneapolis.

* * *

Dr. W. A. Miller, of New York Mills, was honored after fifty-seven years of service at a testimonial banquet and program, February 17, sponsored by the local Lions Club. Besides serving the community as a physician, in his earlier days Dr. Miller was obliged to serve also as dentist and druggist, as the need arose. Dr. E. C. Hanson, toastmaster for the occasion, read a telegram from the Minnesota State Medical Association, congratulating Dr. Miller on his life-time of service in the medical profession. Dr. and Mrs. Miller were both cited for their contributions to community life in general.

* * *

Dr. and Mrs. E. J. Tanquist, of Alexandria, left in late February on a trip to Mexico, Guatemala, and

COMPLETE

Laboratory Service

IN

Deep X-Ray Therapy
Roentgen Diagnosis
Radium Treatment
Radium Rentals
Clinical Biochemistry
Clinical Pathology
Tissue Examination
Clinical Bacteriology
Interpretation of YOUR E.K.G. records
Toxicological Examinations

MURPHY LABORATORIES
—Est. 1919
Minneapolis: 612 Wesley Temple Bldg., At. 4788
St. Paul: 348 Hamm Bldg., Ce. 7125
If no answer call: 222 Exeter Pl., Ne. 1291

Yucatan. On their way back Dr. Tanquist attended the American Academy of General Practice at St. Louis, Missouri.

* * *

Dr. Louis J. Wilson, in medical practice with his father, **Dr. R. H. Wilson,** of Winona, was recalled to active duty with the United States Navy in February. Dr. Wilson received his medical degree from the University of Minnesota in June, 1952. During World War II, he served as an ensign on an aircraft carrier in the Pacific.

* * *

Dr. W. F. Widen, of the Bloomington-Lake Clinic in Minneapolis, was a recent contributor to the *Minneapolis Star* in "What My Religion Means to Me." Dr. Widen has been Sunday School superintendent at Bethlehem Baptist Church for thirty years, is chairman of the Board of Child Evangelism Fellowship for Minneapolis, director of Minneapolis Youth for Christ, winner of several national tennis honors, and was a Navy doctor in the South Pacific in World War II.

* * *

Dr. R. O. Quello, of Minneapolis, spoke to the members of the Richfield Pre-School Mothers Club on "Physical Well-Being of the Child" at the February meeting.

* * *

Dr. Glenn Nelson, of Fairfax, was appointed local chairman for the annual Heart Fund this year.

* * *

Dr. Robert B. Pierce, of Renville, barely escaped injury February 19, when his car was struck by a fast Milwaukee freight train. The car was badly damaged but Dr. Pierce had time to leap free seconds before the crash.

* * *

Dr. H. A. Christiansen, of Jackson, attended the postgraduate course on cardiovascular disease at the University of Minnesota in February.

* * *

Dr. Allan M. Gunn-Smith, recently discharged from service with the U. S. Navy, opened an office in Two Harbors in late February. He shares office space with **Dr. Ralph Papermaster** but has his own practice.

* * *

Dr. Sidney O. Hughes, recently discharged from service with the U. S. Army, joined the staff of the Winona Clinic in March. Dr. Hughes was graduated from the University of Pennsylvania Medical School in 1947. He completed his internship and a medical residency at Presbyterian Hospital in Philadelphia before being called into the army. Dr. Hughes served in Korea on the staff of the 121st Evacuation Hospital in Seoul.

* * *

Dr. Benjamin Viel, director of Chile's leading medical school, has been lecturing on health problems in Chile, at the University of Minnesota, in the absence of Dr. Gaylord Anderson, director of the school of public health, who is in Egypt.

200 acres on the shores of beautiful Lake Chisago

WHERE ALCOHOLICS ACHIEVE INSPIRATION FOR RECOVERY

Where gracious living, a homelike atmosphere and understanding companionship contribute to successful rehabilitation.

The methods of treatment used at the Hazelden Foundation are based on a true understanding of the problem of alcoholism. Among the founders of the nonprofit Hazelden Foundation are men who have recovered from alcoholism through the proved program of Alcoholics Anonymous and who know the problems of the alcoholic. All inquiries will be kept confidential.

HAZELDEN FOUNDATION

Lake Chisago, Center City, Minn. Telephone 83

Dr. David Hoehn, of Holdingford, was elected president of the Central Minnesota Chapter of the American Academy of General Practice, and **Dr. Bernice Andrews,** of Holdingford, was elected secretary at a meeting held in St. Cloud, February 12.

* * *

Dr. J. E. Ponterio, of Shakopee, received word of the death of his father, Angelo Ponterio, in February. Mr. Ponterio was vacationing in Sacramento, California, at the time of his death.

* * *

Dr. Barney Gervais and **Dr. Dave Sanderson,** of Fergus Falls, were among the community members named to the board of directors of the Fergus Falls Jaycees at the meeting, March 3.

* * *

Dr. Arthur C. Kerkhof, clinical assistant professor, Department of Medicine, University of Minnesota, was the guest speaker at a clinical conference on heart disease, held at the Union Hospital in New Ulm, March 5.

* * *

Dr. Owen H. Wangensteen, professor of surgery at the University of Minnesota, accented the hopeful aspect of cancer control at a Cancer campaign meeting held at the Normandy Hotel, Minneapolis, February 26 and 27.

* * *

Commander Percy Demo, son of **Dr. and Mrs. W. A. Demo,** of Blue Earth, has been assigned as physician at the American Embassy in Moscow, Russia. Commander Demo left for his assignment in late March. He will be the only American physician in Moscow, and his tour of duty is expected to extend for eighteen months. Commander Demo received his medical degree from the Iowa State Medical School. Before World War II, he practiced medicine at Wells for twelve years.

* * *

Dr. J. K. Butler, of Cloquet, attended the American Medical Association National Council on Rural Health held in Roanoke, Va., in March.

* * *

Dr. Gordon Vaughn, Saint Paul, was recently appointed National Medical Examiner for the Degree of Honor Protective Association. Dr. Vaughn is a graduate of the University of Minnesota Medical School, has had several years of general practice, and served two years in the Army Medical Corps. Dr. Vaughn is now on the staff of the Health Service at the University of Minnesota Hospitals.

* * *

Dr. Kenath Sponsel, Minneapolis orthopedic surgeon, spoke at a meeting of the Minnesota Chapter, American Physical Therapy Association, on March 4, at the Minneapolis YWCA. He described orthopedic appliances and how they can be adapted or used for physical therapy.

* * *

Dr. Albert V. Stoesser, of the Department of Pediatrics, University of Minnesota, was one of the

first group of candidates to be orally examined by the new Subspecialty Board of Pediatric Allergy. The examination was given at the Children's Hospital, Harvard Medical School, Boston, on February 25, preceding the annual meeting of the American Academy of Allergy.

* * *

Dr. George E. Sherwood, of Kimball, attended the International Session of the American Academy of General Practice, held in Mexico City, April 1.

* * *

Dr. J. J. Carroll became associated with the Hartfiel Medical Clinic in the Montevideo-Maynard community in February. Dr. Carroll is a graduate of Creighton University at Omaha, Nebraska, and interned at St. Joseph's Hospital there. He spent three years in practice at Laurel, Nebraska, and was just recently discharged from the U. S. Air Force.

* * *

A contribution of $750 as a memorial to the late **Dr. Theodore Sherping** was made by the Fergus Falls Rotary Club in February. The funds were turned over to the hospital since the scholarship fund which was previously created by the Club as a Sherping memorial was seldom used.

* * *

Dr. Lyle Weed, of the Department of Bacteriology at the Mayo Clinic, spoke at the Veterans Hospital at Iowa City, Iowa, in February. Dr. Weed spoke on "Bacteriology in Modern Medicine," to doctors of the community, medical students and staff members at the University of Iowa, as well as Veterans Hospital personnel. Dr. Weed was formerly on the staff of the University of Iowa Hospital.

* * *

Dr. Louise Wurdemann, of White Bear Lake, was married to Dan Madison King, of Saint Paul, February 14. Dr. Wurdemann has been practicing in White Bear Lake since 1948. She received her medical degree from the University of Iowa and interned in East Orange General Hospital in East Orange, New Jersey. Mr. King, librarian of the Minnesota Historical Society since 1949, was formerly from New York City, and was connected with the New York Public Library and the Cooper Union for the Advancement of Science and Art.

Dr. C. R. Wall, of Minneapolis, was the guest speaker at a ladies' night banquet given by the Men's Brotherhood of the First Baptist Church at The Palms in St. Cloud. Dr. Wall, who recently returned from an extended tour of Greece, Egypt, Assam and Ethiopia, spoke on the challenge of foreign missions.

* * *

Dr. J. G. Brennan, fellow in dermatology at the Mayo Clinic, was the recipient of the first award in the third annual essay contest sponsored by the American Dermatological Association. His paper was entitled "Contributions to the Study of Pemphigus." Dr. Brennan will present his paper at the next scientific session of the Association which will be held at Lake Placid, New York, June 9 to 13.

Dr. O. K. Gilje, special student in dermatology, won honorable mention in the contest for his paper entitled "Capillary Microscopic Examination of Skin Diseases."

Dr. T. B. Fitzpatrick, former fellow in dermatology, won the award two years ago in the first annual essay contest of the Association.

HOSPITAL NEWS

St. Joseph's Hospital, Saint Paul—Minnesota's oldest hospital—will celebrate its centennial May 16 and 17.

World-famous medical persons who will be present include—Sir Alexander Fleming, British Penicillin discoverer; Dr. Philip S. Hench of the Mayo Clinic, cortisone pioneer; Dr. Richard R. Trail, British tuberculosis specialist; Dr. Louis H. Bauer, Hempstead, New York, president of the American Medical Association; Dr. Harold L. Foss of Danville, Pennsylvania, president of the American College of Surgeons, and Dr. William Boyd, pathologist of the University of British Columbia, at Vancouver.

The two-day celebration will be devoted to sessions in the Hotel Lowry and the Auditorium theater section. A centennial dinner will be held in the Hotel Lowry with reunions of interns, staff physicians, and alumnae of the nursing school. A pontifical high mass will be celebrated Sunday, May 17, in the Cathedral by Archbishop Murray.

Since St. Joseph's Hospital was founded in 1853, by the Sisters of St. Joseph, it has added a number

HOMEWOOD HOSPITAL is one of the Northwest's outstanding hospitals for the treatment of Nervous Disorders—equipped with all the essentials for rendering high-grade service to patient and physician.

Operated in Connection with Glenwood Hills Hospitals

HOMEWOOD HOSPITAL

Corner Penn and Plymouth Avenues North

Minneapolis Minnesota

of historic "firsts" in its field. The first successful removal of a gall bladder in America was done there in 1886 by Dr. Justus Ohage; in 1903, probably the nation's first real use of a bronchoscope was made by Dr. Arnold Schwyzer. Recently the hospital has taken the lead by being the first private hospital to do chest x-rays on all patients routinely on admission.

* * *

A new research laboratory at *Ancker Hospital*, Saint Paul, is nearing completion. It is a small red brick building which houses a chemistry laboratory, an operating room for experimental surgery, a post-surgical recovery room, animal rooms and research workrooms. It is air-conditioned to prevent summer deaths of research animals. Most of the ceilings are unplastered because plastering is expensive, but the walls are tiled. The building is windowless with a modern hood in the chemistry laboratory to draw away dangerous fumes. All planning has benefited from the services of the same architect who designed the Mayo Clinic and Mayo Foundation's new four million dollar medical sciences building.

Construction was planned so additions are possible, as Dr. Ivan Baronofsky plans some day to see a radioisotope laboratory for work with atomic medicines added to the present building.

Dr. Baronofsky, University of Minnesota staff member, director of postgraduate surgical education at Ancker Hospital, is largely responsible for the existence of the new laboratory. When he was told that welfare funds would not be made available for such a laboratory, he managed to recruit some $74,000 in private donations to the Minnesota Medical Foundation. Over the next two years the welfare board added $60,000, thus making the building of the lab possible.

The United States Public Health Service, the Minnesota Heart Association, and the University of Minnesota graduate school have made research grants.

* * *

On January 18, 1953, the new **Hudson Memorial Hospital** was formally opened. The event culminates seven years of planning and demonstrates what persistence on the part of a small community can accomplish.

The community of 3,500 persons at Hudson, Wisconsin, has been in need of a first class hospital for years. The donation, in 1946 of $70,000 by Mr. and Mrs. Stephen C. Phipps of Hudson, in memory of Mr. Phipps' father started the project. Mr. and Mrs. Charles A. Ward, also residents of Hudson, added $50,000 which with $30,000 contributed by the Trustees of the Dr. Boyd Williams Estate Trust and $40,000 by the town of Hudson was supplanted by individual donations from some 900 families to attain the goal of $469,000. The hospital auxiliary, with 500 members, sponsored teas and card parties and prepared the linen and gowns. Volunteers helped clear the ground and police the hospital for the grand opening. As a result of community cooperation, the hospital is debt-free and has a fund of $20,000 to start operation. No government funds were requested or received.

For the Failing Heart of Middle Life

Prescribe 2 or 3 tablets of Theocalcin, t. i. d. After relief is obtained, continue with smaller doses to keep the patient comfortable. Theocalcin strengthens heart action, diminishes dyspnea and reduces edema.

Brand of theobromine-calcium salicylate,
Trade Mark reg. U. S. Pat. Off.

Bilhuber-Knoll Corp. Orange, N. J.

The Hudson Memorial Hospital has eight private and twelve semi-private rooms, all with picture windows overlooking the St. Croix valley. The hospital is complete with a central oxygen supply piped to each room, a delivery room equipped with an oxygen-air pressure lock, a device for inducing natural breathing in newborn infants, modern laboratories and an out-patient department.

The inhabitants of Hudson are to be congratulated on their community spirit.

* * *

Dr. R. H. Moe was elected the new chief of staff of St. Mary's Hospital, Duluth, and Dr. F. T. Becker, the new acting chief. Dr. G. C. McRae was chosen chief-of-staff-elect, and Dr. J. D. Barker, secretary.

Departmental chiefs named for two-year terms were Dr. J. S. Spang, surgery; Dr. R. O. Bergan, pediatrics and contagion; Dr. J. E. Haavik, neuropsychiatry; Dr. J. F. Schmid, dermatology, and Dr. J. F. Feuling, physical medicine.

* * *

Dr. Nordahl P. Peterson was named the chief of *Swedish Hospital* medical staff for 1953, with Dr. Leonard S. Arling, vice president, and Dr. Elmer T. Cedar, secretary-treasurer, at the regular meeting in March. The executive committee includes Dr. Russell C. Lindgren, Dr. Robert E. Johnson, Dr. Arthur N. Russeth and Dr. V. J. P. Lundquist.

* * *

Dr. Henry C. Goss was elected chief of staff at the *Glencoe Municipal Hospital* at the annual meeting held in March. Dr. C. W. Truesdale was named secretary-treasurer.

BLUE CROSS-BLUE SHIELD NEWS

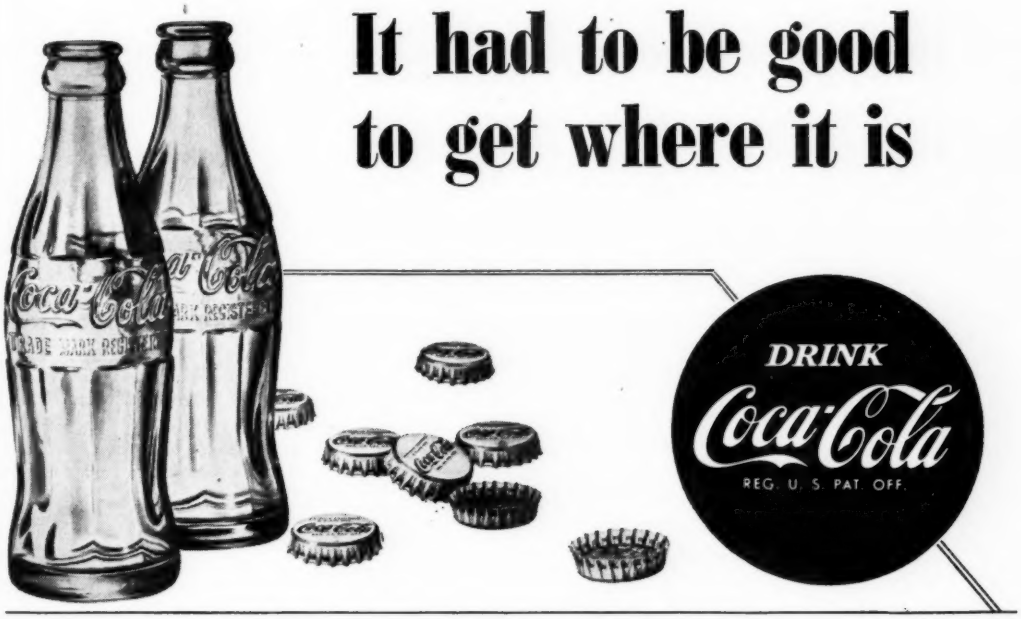
During the approximate five years that Blue Shield has been operating, it has shown a continued growth in enrollment. In the earlier development of Blue Cross and Blue Shield, the need was experienced for swift mass enrollment, and in addition this was felt to be the soundest method of securing subscribers. After several years, complaints were voiced by self-employed persons and those who were unable to secure coverage through a group. This was particularly true in the rural areas of Minnesota, and it became apparent that employed people of urban areas enjoyed a distinct advantage. Thus, with some misgivings, the first non-group campaign was initiated with only one effective date per year. The actuarial soundness of non-group enrollment, based on critical screening of the applications to eliminate undesirable risks, became immediately apparent so that the program was expanded to three or four enrollment dates a year. In keeping with this program of covering more people and increased benefits, the Board of Directors has approved a policy for continuous non-group enrollment offering to every eligible person the opportunity to participate in the plan without the necessity of waiting for infrequent or periodic enrollment dates. This represents another significant milestone in the long-range program of providing the maximum in medical and surgical benefits to the greatest number of people at a cost which they can afford.

The benefit increases which went into effect on October 1, 1952, are now beginning to be reflected in the monthly Blue Shield claims payments for services rendered by doctors of medicine. On the basis of the present enrollment in Blue Shield with its increased benefits, analysis shows that payments to doctors for services rendered will exceed four and one-half million dollars in 1953. With the growing demand of the public to be adequately protected in the field of medical and surgical care, the foregoing facts clearly indicate that Blue Shield by increasing its benefits and coverage is providing the solution for financial burdens involved in maintaining and increasing health standards. Such expansion is part of a long-range program to make the "Doctors Plan" the foremost method in the nation for the relief of the public from the financial hazards involved in the preservation of health.

Such a program requires the constant co-operation of the members of the medical profession as well as their knowing what Blue Shield provides, what it does not cover, and whenever possible their securing new subscribers for the plan. To aid in the administration of this year-around continuous non-group enrollment policy, new non-group applications are now being prepared, and with them, the mechanics of enrollment are simple. The applicant must be under sixty-five years of age,

PHYSICIANS AND HOSPITALS SUPPLY CO., Inc.
1400 HARMON PLACE, MINNEAPOLIS, MINN.
INSTRUMENTS · TRUSSES · EQUIPMENT · PHARMACEUTICALS · DRUGS
MAIN 2494

Insurance at a Saving Druggists' Mutual Insurance Company *Prompt Loss Service*
OF IOWA, ALGONA, IOWA
Fire · Tornado · Automobile Insurance
MINNESOTA REPRESENTATIVE—S. E. STRUBLE, WYOMING, MINN.



THE COCA-COLA COMPANY

give a small amount of medical history and mail the application to the Blue Shield office. Review of the medical history is being revised so that as few riders or exclusions as possible will be issued in conjunction with these contracts.

In establishing this program, complete analysis has been made of similar enrollment programs carried on by other Blue Shield plans in the nation. Every method has been made to utilize the best features of those plans which have been successful in promoting such a program, and to eliminate insofar as possible any restrictions upon enrollment. For actuarial soundness, some limitations or enumeration of those things which Blue Shield does not cover, are essential. Only in this manner, will the plan be financially secure for its participating subscribers regardless of epidemics or catastrophic emergencies. A successful non-group enrollment campaign carried on by Blue Shield with the co-operation of its participating physicians will assist materially in the further growth of the plan, and will provide the proper security for unlimited future development and expansion toward the goal of complete solution of the socio-economic problem involved in providing the best in high-grade medical and surgical care.

MEDINA CRITICIZES SEARCH FOR SECURITY

Federal Judge Harold R. Medina, of New York, said that "everyone seems to be looking for security." Boys just out of college ask personnel directors what the pension rights are and at what age they will be allowed to retire, he said at the summer commencement exercises of the University of Chattanooga. "Croakers abound everywhere telling us that everything is going to pot, that the world is plumb full of corruption, and that nothing can be done about it.

"But the truth is that this do-nothing policy of playing everything safe is just about the worst thing that a person can do."

Turning to the Scriptural parable of the talents, in which those who traded and thus increased the number of their talents were commended while one who hid his talent in the earth was reproved, Judge Medina said that he believed this was a lesson "telling us, don't be afraid, don't be cynical, don't be lazy, keep plugging away all the time with zest and enthusiasm." The talent was both an ancient weight and unit of money.—*New York Times*, Sept. 3, 1952.

RADIUM & RADIUM D+E

(Including Radium Applicators)

FOR ALL MEDICAL PURPOSES

Est. 1919

Quincy X-Ray and Radium Laboratories

(Owned and Directed by a Physician-Radiologist)

Harold Swanberg, B.S., M.D., Director

W.C.U. Bldg. **Quincy, Illinois**

BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

BOOKS RECEIVED FOR REVIEW

RYPINS' MEDICAL LICENSURE EXAMINATIONS. Topical Summaries and Questions. Seventh Edition. Walter L. Bierring, M.D., F.A.C.P., M.R.C.P. Edin. (Hon.). Former Member, National Board of Medical Examiners, American Board of Internal Medicine, Iowa State Board of Medical Examiners; Professor Emeritus Theory and Practice of Medicine, College of Medicine, State University of Iowa; Secretary Federation of State Medical Boards of the United States; Chairman, American Board of Preventive Medicine and Public Health; Iowa State Commissioner of Health. With collaboration of a Review Panel. 856 pages. Price $8.00, cloth. Philadelphia: J. B. Lippincott Co., 1952.

CLINICAL APPLICATIONS OF SUGGESTION AND HYPNOSIS. Second Edition. William T. Heron, M.A., Ph.D., Professor of Psychology, University of Minnesota, Minneapolis, Minnesota. 137 pages. Price $3.75, cloth. Springfield, Illinois: Charles C Thomas, 1953.

DOCTOR IN THE HOUSE. Richard Gordon, 186 pages. Price $2.75, cloth. New York: Harcourt, Brace & Co., New York, 1953.

CHILD DEVELOPMENT. The Process of Growing Up in Society. William E. Martin and Celia Burns Stendler, of the University of Illinois. Under the editorship of Willard B. Spalding, Oregon State System of Higher Education. 519 pages. Illus. Price $6.50, cloth. New York: Harcourt, Brace & Co., New York, 1953.

CLINICAL ALLERGY. French K. Hansel, Director, Hansel Foundation for Education and Research in Allergy; Chief of Allergy Service, DePaul Hospital, St. Louis. 1005 pages. Illus. Price $17.50. St. Louis, C. V. Mosby Co., 1953.

This book was written to replace Dr. Hansel's limited text on *Allergy of the Nose and Paranasal Sinuses* (1936). Because of the great advances in the knowledge of allergy, the earlier text is no longer adequate today.

The author has written this for anyone interested in the subject. It is for the specialist, for the general practioner, and for the beginner in allergy.

In the first chapter, terminology is discussed so that there will be no confusion as to meaning of terms; and included is a revised list of definitions, prepared by the Committee on Nomenclature of the Association of Allergy Clinics of Greater New York, and a historical review of the field of allergy.

Dr. Hansel presents his subject by giving first the basic concepts of anaphylaxis and allergy. Then he describes the different types of allergies, such as serum allergy, allergic reactions to insects, hay fever due to pollens. Diagnosing allergies requires careful history taking and testing. For the latter, the author lists supplies needed, explains how to prepare dilutions, and outlines the technique of giving tests, and discusses the interpretation of reactions.

A large section of the book is devoted to discussion of the manifestations and treatment of allergy from the standpoint of organs and system involved; and five chapters are given over to allergy in children. The bibliography at the end of each chapter contains numerous and up-to-date references.

M.M.P.

OFFICE MANAGEMENT OF OCULAR DISEASES. By William F. Hughes, Jr., M.D., Professor and Head, Department of Ophthalmology, University of Illinois College of Medicine; Ophthalmologist in Chief, Illinois Eye and Ear Infirmary, and Attending Ophthalmologist, Presbyterian Hospital, Chicago. 452 pages. Illus. Price $9.00. Chicago: Year Book Publishers, ©1953.

"Office management of ocular diseases" is a well-planned, well-written summary of the diagnosis and treatment of diseases commonly encountered in ophthalmological practice. The author is particularly well qualified because of his special interest and past contributions to the literature in the field of beta radiation therapy, corneal burns and plastic surgery of the lids; and in these fields the book is particularly excellent. The chapter on Radiation treatment of the eye contains basic information presented in a form which is readable and understandable. It could be read with profit by every ophthalmologist even though this therapy is usually carried out in collaboration with a radiologist.

DANIELSON MEDICAL ARTS PHARMACY, INC.
10-14 Arcade, Medical Arts Building
825 Nicollet Avenue—Two Entrances—78 South Ninth Street
MINNEAPOLIS
PHONES:
ATLANTIC 3317
ATLANTIC 3318
HOURS:
WEEK DAYS—8 to 7
SUN. AND HOL.—10 TO 1

Ulmer
PHARMACAL COMPANY
1400 Harmon Place
Minneapolis 3, Minnesota
send for our new brochure M-453b on
ULVICAL "ULMER"
the last word in pre-natal therapy

ACCIDENT • HOSPITAL • SICKNESS

INSURANCE

For Physicians, Surgeons, Dentists Exclusively

$5,000 accidental death Quarterly $8.00 **$25 weekly indemnity, accident and sickness**	**$15,000 accidental death Quarterly $24.00** **$75 weekly indemnity, accident and sickness**
$10,000 accidental death Quarterly $16.00 **$50 weekly indemnity, accident and sickness**	**$20,000 accidental death Quarterly $32.00** **$100 weekly indemnity, accident and sickness**

COST HAS NEVER EXCEEDED AMOUNTS SHOWN

ALSO HOSPITAL INSURANCE

	Single	Double	Triple	Quadruple
60 days in Hospital	5.00 per day	10.00 per day	15.00 per day	20.00 per day
30 days of Nurse at Home	5.00 per day	10.00 per day	15.00 per day	20.00 per day
Laboratory Fees in Hospital	5.00	10.00	15.00	20.00
Operating Room in Hospital	10.00	20.00	30.00	40.00
Anesthetic in Hospital	10.00	20.00	30.00	40.00
X-Ray in Hospital	10.00	20.00	30.00	40.00
Medicines in Hospital	10.00	20.00	30.00	40.00
Ambulance to or from Hospital	10.00	20.00	30.00	40.00
COSTS	**(Quarterly)**			
Adult	2.50	5.00	7.50	10.00
Child to age 19	1.50	3.00	4.50	6.00
Child over age 19	2.50	5.00	7.50	10.00

$4,000,000.00
INVESTED ASSETS

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION

51 years under the same management

400 First National Bank Building
Omaha 2, Nebraska

$19,500,000.00
PAID FOR CLAIMS

$200,000.00 deposited with State of Nebraska for protection of our members

The book contains up-to-date information on all new drugs and procedures. For example, the indications for the use of cortisone are extensively outlined; and the techniques of measurement of rate of aqueous outflow (tonography) and of application of beta rays to the cornea are detailed.

A general practitioner could have no better reference book in emergency office treatment of eye diseases and minor eye and lid surgery he may be called upon to perform. The short but adequate summaries of neuro-ophthalmology, and diseases of the conjunctiva, cornea and orbit would be invaluable to him. The taking of visual fields, modern treatment of cataracts and glaucoma and problems of ocular motility are treated with enough basic information to give the general practitioner an understanding of the ophthalmologist's treatment. Indeed, the only criticism of the book, and it is a forgivable one, is that quite extensive passages would be elementary for the average opthalmologist and seem better designed for a non-specialist or student.

J. A. McNeill, M.D.

SECOND ANNUAL REPORT ON STRESS. Hans Selye, M.D., Ph.D. (Prague), D.Sc. (McGill), F.R.S. (Canada), Professor and Director of the Institut de Médecine et de Chirurgie expérimentales, Université de Montréal, and Alexander Horava, M.D. (Lausanne), Research Associate and Librarian of the Institut de Médecine et de Chirurgie expérimentales, Université de Montreal. 526 pages. Illus. Cost $10.00. Montreal: Acta, Inc., ©1952.

This volume is the second of a series of annual supplements to the book, *Stress—The Physiology and Pathology of Exposure to Stress,* by Hans Selye. According to the introduction (p. 1), these annual reports are "written as a combination of an extensive classified index of pertinent new facts (literature and unpublished observations made at our Institute during the year) with a concise evaluation of the principal findings." That such a compilation is a task is evidenced by the fact that in this volume alone references are made to over 4,000 publications.

Before attempting to use this volume, one is urged to study the introduction which explains how to use the annual report to best advantage. The report contains a "brief synopsis of the stress concept as it presents itself in 1952," the fourteen principal criticisms of the concept, and the problems to be solved. It also contains a classified index to the references covering both general and special physiology and pathology of stress with introductory notes. There is a series of photographs showing recent observations on the effects of stress and the adaptive hormones. The bibliography itself is arranged alphabetically by author; and for quick reference there is an alphabetical subject index at the end.

M.M.P.

MEDICAL MANAGEMENT OF GASTROINTESTINAL DISORDERS. Garnett Cheney, M.D., Clinical Professor of Medicine, Stanford University Medical School. 478 pages. Illus. Price, $6.75. Chicago: The Year Book Publishers, 1950.

This very readable book is divided into two parts. The first part is called "The Patient Approach" and deals with the all-important history and physical examination. Clinical laboratory examinations are dealt with in turn, followed by the indications for special endoscopic and x-ray examinations.

The second half of the book deals with gastrointestinal disorders from the point of view of symptomatology instead of the more orthodox method of presenting diagnoses. This method makes the book a handy reference source for the practitioner or student.

The author presents a concise, common sense approach to the medical management of Gastroenterology. Psychogenic and somatic aspects are presented in sound perspective.

The book is of interest to the internist and should be of particular value to the student and general practitioner.

DWIGHT L. MARTIN, M.D.

TEXTBOOK OF SURGERY. Edited by H. F. Moseley, M.A., D.M., M.Ch. (Oxon), F.A.C.S., F.R.C.S. (Eng.), F.R.C.S. (C.), Assistant Professor of Surgery, McGill University; Associate Surgeon, Royal Victoria Hospital, Montreal, Canada. Foreword by G. Gavin Miller, M.D., C.M., M.Sc., F.R.C.S. (C.), F.A.C.S., Chairman of the Surgical Department, McGill University; Surgeon-in-Chief, Royal Victoria Hospital, Montreal, Canada. 896 pages. Illus. Price, $15. St. Louis: C. V. Mosby Co., 1952.

This unusually good textbook of surgery is edited by an assistant professor of surgery at McGill University. The organization and presentation of material makes it a fine text for the student and intern as well as a good reference work for the physician. Of particular note is the use made of illustrations throughout the text. Forty-six color plates, most of which were produced by Frank Netter, serve as potent visual aids to the well-organized text. In addition to these plates, there are 460 figures consisting of clear reproductions of roentgenograms, lucid diagrams and good photographs to illustrate the text. It is the intelligent use of these plates and figures which make this book stand out among the rank and file of surgical texts. For example, many pages could not describe what Netter has conveyed in four color plates dealing with the diseases of the prostate gland.

The text has been carefully considered and finely written. Its brevity is commendable. Discussion of diseases and pathologic conditions is succinct but adequate while the presentation of methods of treatment is complete and thoroughly up to date.

The chapter on the heart and pericardium contains much about congenital cardiac lesions, cardiac arrest, and acquired cardiac lesions not found in other texts of surgery. The treatment of these lesions is presented in a manner which makes it simple for the student to understand the principles of the operations.

In general, the chapter on thoracic surgery is good. However, the changes in the field of surgery of pulmonary tuberculosis have been so rapid that this section is already somewhat outdated. Mention is made of resectional surgery for pulmonary tuberculosis, but too little space is given this method of therapy, while too much space is allotted to thoracoplasty.

On the whole the book can be recommended as one of the best textbooks of surgery to date. Certainly it is a text which will allow the medical students to more simply and quickly cover the broad field of surgery. It is pleasant to find a book which offers sensible short cuts to understanding at the present time, when we are so prone to overwhelm the reader with verbosity.

FREDERICH M. OWENS, JR., M.D.

PHYSICIANS' COLLECTIONS SHOW SLIGHT DECLINE

The average United States physician collected 85 per cent of the bills owed him by patients last year—a decline of three percentage points in his rate of collections since 1948.

So states the March issue of *Medical Economics*, national business magazine for doctors, which is publishing the results of a nationwide survey of medical practice, based on a questionnaire sent to each of its 134,000 physician-readers.

The magazine also found that the average doctor nowadays takes in $2,601 a year from Blue Shield and other health plans. This amounts to about 11 per cent of his gross income.

SKILL AND CARE!

Combine with quality materials in all Buchstein-Medcalf orthopedic appliances. Our workmanship and scientific design conform to the most exacting professional specifications. Accepted and appreciated by physicians and their patients for more than 45 years.

ARTIFICIAL LIMBS, TRUSSES, ORTHOPEDIC APPLIANCES, SUPPORTERS, ELASTIC HOSIERY

Prompt, painstaking service

Buchstein-Medcalf Co.
223 So. 6th St. Minneapolis 2, Minn.

RADIUM RENTAL SERVICE
4340 W. 24TH STREET
MINNEAPOLIS 5, MINNESOTA
TEL. ATLANTIC 5297

Radium element prepared in type of applicator requested

ORDER BY TELEPHONE OR MAIL
PRICES ON REQUEST